



**STATEWIDE TECHNICAL ASSISTANCE**

**JOB PERFORMANCE REPORT  
PROJECT F-82-T-4**

**SUBPROJECT I: FISHERIES PROGRAM COORDINATION AND SUPERVISION**

**SUBPROJECT II: JOB 1, STATEWIDE WATER QUALITY**

**SUBPROJECT II: JOB 2, WATER QUALITY INVESTIGATIONS**

**SUBPROJECT III: JOB 1, PANHANDLE REGION TECHNICAL GUIDANCE**

**SUBPROJECT III: JOB 2, SOUTHWEST REGION TECHNICAL GUIDANCE**

**SUBPROJECT III: JOB 3, MAGIC VALLEY REGION TECHNICAL GUIDANCE**

**SUBPROJECT III: JOB 4, UPPER SNAKE REGION TECHNICAL GUIDANCE**

**PERIOD COVERED: JANUARY 1, 1993 TO DECEMBER 31, 1993**

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## JOB PERFORMANCE REPORT

State of: Idaho

Name: FISHERY PROGRAM COORDINATION

Project No.: F-82-T-4

Title: Fisheries Program Coordination  
and Supervision

Subproject No.: I

**Period Covered:** January 1, 1993 to December 31, 1993

## ABSTRACT

During the study period the Federal Energy Regulatory Commission (FERC) made request for comment on 61 hydroelectric projects in the State of Idaho. Idaho Department of Fish and Game (IDFG) personnel also provided technical assistance to Idaho Power for the design and implementation of mitigation/enhancement at seven hydroelectric facilities with applications for relicensing.

In addition to the coordination of hydroelectric comments in Idaho, I coordinated IDFG involvement with U.S. Forest Service grazing activities, State of Idaho State and Basin water plans, Idaho Forest Practices Act Advisory Committee, the Columbia Basin Fish and Wildlife Authority, and various other state and federal projects effecting Idaho waters.

Author:

Will Reid  
Fisheries Program Coordinator

## **OBJECTIVES**

To provide technical assistance to city, county, state, and federal agencies in matters relating to fish and wildlife habitat and to provide to the FERC position and policy statement of the IDFG regarding specific hydroelectric development.

## **TECHNIQUES USED**

During the study period, IDFG personnel reviewed proposals to construct hydroelectric facilities throughout the State of Idaho. We then provided comments to the FERC and private developers on the impacts that hydroelectric development would have on fish and wildlife resources. We also offered review and comments to other federal, state, city, county agencies, and private concerns on statewide activities that might impact fish and wildlife habitat.

During the study period, I also provided supervision and direction for subproject II and technical assistance for subproject III in this report.

## **FINDINGS**

### Federal Energy Regulatory Commission

During the study period, 1 January 1993 to 31 December 1993, I provided a review of 56 different proposals for hydroelectric development in Idaho (Table 1). The 56 projects reviewed by IDFG personnel compares to 18 in the State of Montana, 29 in Oregon, and 51 in Washington.

The majority of the FERC actions occurred on projects requesting amendments to existing licenses (17). No single phase of the licensing process dominated time allotments to hydro operations. A number of small co-generation projects continued to go through the licensing process. The FERC issued license exemptions for three projects in 1993, all on existing irrigation diversions. The FERC also issued one license for a major project on Falls River.

Idaho Power Company relicensing projects continued studies. I provided technical assistance to Idaho Power Company biologists for fishery resource inventory and proposed mitigation actions at seven projects due for relicensing by the year 2000. The Idaho Power Company project at Milner Dam came on line in 1993. In addition, Utah Power had a relicense issued for one project on the Bear River and one on the Snake River at Ashton.

### Valbois Ski Resort

During 1993, IDFG personnel continued negotiations with the developers of the proposed Valbois ski resort near Cascade Reservoir. It now appears likely that the developers of the proposed resort near Cascade Reservoir will not have the resources to construct and meet environmental concerns.

### Forest Practices

At the Forest Practices Act Advisory Committee, I assisted in the revision of the Forest Practices Act. New modifications to the Act include increasing the size of the stream protection zone on Class II (non-fish bearing) streams from 5 to 30 feet. We also removed the language which restricted leave stream requirements to Class I streams only. Support for the changes to the Class II stream spz came through the local working committees and new federal guidelines for protection of salmon habitat.

### Northwest Power Planning Council

During the study period, I worked with the Northwest Power Planning Council (NPPC) to develop amendments to the NPPC resident fish mitigation and resident fish substitution measures.

### Water Planning

IDFG personnel cooperated with the Idaho Department of Water Resources (IDWR) in the development and implementation of the Mid Snake River Plan. Actions in the Mid Snake River Plan would prohibit hydro development and other activities which would degrade fish habitat.



Table 1. Summary of Federal Energy Regulatory Commission (FERC) actions in Idaho, January 1, 1993 to December 31, 1993.

FERC STATUS	NUMBER OF PROJECTS
PP-PND	4
PP-GTD	3
PP-EXP	4
PP-SUR	6
PP-CAN	3
LC-PND	3
LC-GTD	1
LC-DND	5
LC-SUR	1
LA-PND	4
LA-GTD	17
LA-SUR	1
RL-PND	3
RL-GND	2
EX-PND	1
EX-GTD	3
TOTAL 1993	56
ON LINE IN 1993	5
PP-PND = Preliminary Permit Pending	
PP-GTD = Preliminary Permit Granted	
PP-EXP = Preliminary Permit Expired	
PP-DND = Preliminary Permit Denied	
PP-CAN = Preliminary Permit Canceled	
LC-PND = License Pending	
LC-GTD = License Granted	
LC-DND = License Denied	
LC-SUR = License Surrendered	
LA-GTD = License Amendment Granted	
EX-PND = Exemption Pending	
EX-GTD = Exemption Granted	
RL-GND = Relicense Granted	
RL-PND = Relicense Pending	

## JOB PERFORMANCE REPORT

State of: Idaho                      Name: FISHERY PROGRAM COORDINATION  
Project No.: F-82-T-4              Title: Statewide Water Quality  
Subproject No.: II                      Job No.: 1

Period Covered: January 1, 1993 to December 31, 1993

### ABSTRACT

In 1993 I was involved with a number of different agencies and organizations in an effort to maintain water quality for aquatic resources. Most of the involvement took place at meetings and on field tours. I made comments on timber, agricultural and mining activities. They generally involved maintaining good aquatic habitat from the standpoint of sedimentation and riparian zones.

Author:

John T. Heimer  
Staff Fishery Biologist

## **OBJECTIVES**

To provide technical assistance to agencies on activities that may impact Idaho's water quality as it relates to fish habitat and aquatic populations.

## **FINDINGS**

The water quality coordinator is an Idaho Department of Fish and Game (IDFG) representative on a number of different committees or work groups dealing with water and habitat issues. These include but are not limited to the following:

### Local Working Committees-Reconvened

We reconvened three different Local Working Committees (LWCs) in 1993. These committees and comments on them are as follows:

#### **Morgan Creek Local Working Committee**

At Morgan Creek, a tributary of the Salmon River downstream from Challis, Idaho, we discussed the Antidegradation Process as it relates to water quality requirements for agricultural and mining activities, the feedback loop, funding of monitoring programs, and the effects of beavers on water quality.

#### **North Fork Salmon River Local Working Committee**

At a meeting of the North Fork Salmon River LWC, we discussed sediment and water temperature trends in the drainage, water quality requirements for other resource activities, and highway road construction.

#### **Powell Local Working Committee**

At the Powell LWC we inspected and discussed the Cedar Face Timber Sale, road maintenance on 500 road and 109 road. We also looked at completed mitigation to date on 111 road and 360 road. We also discussed water quality in Walton Creek as it relates to problems at our fish hatchery.

### Local Working Committees-New

Three new LWCs were established in 1993 and another was discussed. These committees and comments on them are as follows:

### **Jim Brown Creek Local Working Committee**

We spent one day on a field tour at which time we discussed water quality problems in the Jim Brown Creek drainage. The general consensus was that livestock grazing was a problem along with water temperatures. It was planned to do monitor temperatures in the drainage in an attempt to assess temperature conditions. It was also recommended to continue with the coordinated road closures.

### **Bear/Cuprum Local Working Committee**

We had one field trip and a number of meetings to discuss water quality objectives and site specific best management practices (BMPs) for Bear Creek, Crooked River, Wildhorse River and Indian Creek, tributaries to Hells Canyon. Specific BMPs had not been agreed to at the end of the calendar year but discussions centered around a wider stream protection zone and pre-operational inspections by the Idaho Department of Lands (IDL) Forest Practice Advisor.

### **North Fork Payette Local Working Committee**

Discussions on specific BMPs in this drainage involved stream protection zones covering both Class I and Class II streams, on-the-ground control of operators to prevent mistakes and possible violations of the Forest Practices Act, an annual road inventory and correction of road problems each year before weather closures. One field tour and one office meeting regarding this subject was held in 1992.

### **Clear Creek Local Working Committee**

One meeting was held on forming a LWC for Clear Creek, a tributary of the Middle Fork Clearwater River. A questionnaire was sent to those in attendance regarding the process. A LWC is scheduled to form in 1994.

### **Stream Segments of Concern**

I attended a meeting at which time we finalized the selections of stream segments of concern covering this period of the antidegradation process.

### **Timber Harvest Regulatory Meetings**

I attended a Forest Practices Act Advisory Committee meeting at which time the 1992 timber harvest audits were discussed. I had earlier assisted with this process by being part of the audit team.

I attended a meeting with a consultant from the Plum Creek Timber Company on water quality problems at our Walton Creek Hatchery. These sediment problems are a result of timber harvest operations in the Walton Creek drainage.

### **Cumulative Watershed Effects**

For the last two years I have been a member of an interdisciplinary task force put together by the IDL. The purpose of this task force is to develop a cumulative watershed effects analysis and control process to ensure watersheds are managed to protect water quality so that beneficial uses are assured. To deal with problems caused by cumulative effects, the Idaho Legislature amended the Forest Practices Act in 1991 by adding the following definition:

"Cumulative effects" mean the impact of water quality and/or beneficial uses which can result from the incremental impact of two (2) or more forest practices. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. (Section 38-1303(17), Idaho Code)

The cumulative watershed effects process as drafted leads the evaluator to a numerical rating of the watershed conditions using the following assessments: erosion hazard, fine sediment, channel stability, sediment delivery, canopy closure/stream temperature, nutrient, hydrologic risk, and adverse condition. A detailed watershed analysis is called for if the assessments do not adequately determine watershed conditions. The assessments will be done by the landowners who want to harvest timber. Drainages (none over 20,000 acres) will be classified as to their erosion hazard potential for this process. The process, which will require a period of time for phase-in, will eventually cover every timber harvest operation in the state.

### **Mining Best Management Practices**

As a member of the Mining Advisory Technical Committee, I spent two days evaluating BMPs at phosphate mines in eastern Idaho. These mines included those located at Wooley Valley, Rasmussen Ridge, Dry Valley, Enoch Valley, and Maybe Creek. Also, this group developed a memorandum of understanding between agencies as to their responsibilities from the standpoint of mining operations.

I spent some time compiling and reviewing information on the Blackbird Mine near Panther Creek, a tributary to the Salmon River. As a result of mining pollution due to high concentrations of cobalt, copper and magnesium salmonid

populations in streams which drain the mine area have either been eliminated or severely reduced. The state, through the Attorney Generals Office, is attempting to get this long-term problem resolved. -

I inspected and commented on BMPs at the Grouse Creek Mine near Sunbeam, Idaho. This gold mine, developed by the Hecla Mining Company, is starting mining operations after being in developmental stages the past few years. To date, a considerable amount of turbidity data has been collected to assess effects of mining operations. As a mitigation measure, Hecla has reconstructed a section of Jordan Creek.

### **Idaho Legislature**

I spent some time reviewing, commenting, and testifying on state legislation. Two river planning bills passed the Legislature; they covered sections of the Henrys Fork and the Boise River. I opposed legislation to require that all minimum streamflow bills must pass the Legislature in order to become law, instead of them being submitted as is presently the case.

### **Best Management Practices Technical Committee**

Four work groups reported to this committee regarding the development of agricultural component practices. They were the Grazing/Riparian Work Group, the Best Management Practices Effectiveness Subcommittee, the Groundwater Work Group, and the Best Management Practices Technical Committee. The most active was the Grazing/Riparian Work Group which met monthly. This group reviewed and modified BMPs covering grazing and riparian activities. Their recommendations were submitted for inclusion into the Agricultural Plan.

### **Water Quality Technical Committee**

This committee met semiannually and discussed such items as Idaho's antidegradation program, the groundwater quality plan, urban impacts on water quality, and the state pesticide management plan.

### **Upper Snake River National Water Quality Assessment Program**

As a member of the Idaho Liaison Committee, we met and discussed ground water/surface water quality, aquatic biological data collected in 1993 and scheduled activities for 1994.

## **Symposium Activities**

I helped on two different committees to plan symposiums in 1994. One, entitled "Rivers At The Crossroads-Law, Science, Politics and People," was designed for discussions of issues on water and river management. It was held on March 18 and 19, 1994. The other, entitled "Diverse Issues-Seeking Common Ground," will deal with conflict resolutions and cover topics related to forestry, agriculture, mining and other activities. It is scheduled for December 8 and 9, 1994.

## **Idaho Rivers Working Group**

This group meets every three to six months and discusses such items as wild and scenic river suitability studies, river designations and memorandums of understanding. It sponsored a trip down the South Fork of the Payette River for on-the-ground discussions of river issues by personnel representing the agencies involved.

## JOB PERFORMANCE REPORT

State of: Idaho                      Name: FISHERY PROGRAM COORDINATION  
Project No.: F-82-T-4              Title: Water Quantity Investigation  
Subproject No.: II                      Job No.: 2

Period Covered: January 1, 1993 to December 31, 1993

### ABSTRACT

In 1993, Idaho Department of Fish and Game (IDFG) personnel developed recommendations and participated in proceedings for minimum flow/lake level requests on several rivers, streams, and lakes statewide. Three applications are pending public hearings, and additional data were collected on six streams which will be modeled and recommendations made in 1994.

IDFG is proceeding with its claims to water rights in the Snake River Basin Adjudication (SRBA). Several basin-wide issues have been raised before the SRBA Court (Court), resulting in the re-write of several important water laws. As a result, the Court has placed a stay on all proceedings in the SRBA until it can evaluate the impact of the new legislation.

IDFG personnel were involved in numerous water quantity issues during 1993, including water right protests and the controversy over the conjunctive management of surface and ground water. IDFG has concerns that current and proposed water management practices have and will continue to impact fish and wildlife resources.

Fishery investigations in Buck Creek continued in 1993. Average densities of cutthroat trout (by reach) were less variable and intermediate in magnitude in 1993 than in previous years.

Author:

Cindy Robertson  
Staff Fishery Biologist



## **OBJECTIVES**

To provide recommendations for minimum stream flows for selected streams statewide and to coordinate the IDFG filings in the SRBA and the filing of water right protests. Also prepare IDFG comments on water quantity issues that may impact fish, wildlife, and aquatic habitat.

## **FINDINGS**

### **Instream Flow Program**

#### **Boise River**

During 1993, IDFG presented recommendations to the Idaho Water Resource Board (Board) for instream flows to protect fish, wildlife, and aquatic and riparian habitat for the Boise River. The Board rejected the request on the basis that the Boise River was already fully appropriated, and there was no water to fill the instream flow request. Shortly after our request was turned down, the Idaho Department of Water Resources (IDWR) received an application for a permit from the Boise Water Corporation (BWC) to appropriate water from the Boise River for municipal purposes. On the basis that the Boise River was already fully appropriated, we protested the application, as did Idaho Rivers United (IRU), a local conservation group. Subsequently, an agreement was crafted to resolve the protests. The agreement recognizes an existing Bureau of Reclamation (BOR) water right permit that allows flows to be released for stream channel maintenance in the Boise River during the non-irrigation season. Additionally, BWC agreed to subordinate its 1993 water right to future instream flow water rights on the Boise River.

#### **Northern Idaho Rivers**

Public hearings were held during October 1993 to hear testimony regarding minimum stream flow requests on five river segments in northern Idaho. The river segments included the Pack River from Zuni Creek to Grouse Creek; Moyie River from Meadow Creek to the backwaters of Moyie Falls Reservoir; Spokane River from Post Falls Dam to the WA-ID border; and Coeur d'Alene River from the South Fork to Coeur d'Alene Lake. These four permits were approved by IDWR and subsequently approved by the 1994 state legislature.

A flow request for the Kootenai River, from the ID-MT border to Bonners Ferry, also was discussed at a public hearing, but questions regarding the status of an ongoing instream flow study prompted the Board to delay proceeding with the application for one year. The delay is intended to give the Board time to

consider the results of the study and decide if the application for a minimum flow needs to be amended.

### **Wet and Badger-creeks and Bear Lake**

Minimum stream flow requests for Wet and Badger creeks (eastern Idaho) were filed with the Board in 1991 and approved by IDWR in 1993. The 1994 Legislature approved the filings by default after an attempt to deny them was defeated for lack of support.

An application for a minimum lake level for Bear Lake was received by the Board and approved by IDWR in 1993. It also was approved by the Legislature during the 1994 session.

### **Pending Applications**

Three additional applications for instream flows/minimum lake levels were filed in 1992/1993. These included Cub River (southeastern Idaho), Beaver and Gamble lakes (northern Idaho). A public information meeting was held in late 1993 for the Beaver and Gamble lakes requests, and they are scheduled to go to a public hearing in late 1994. The Cub River application has put on hold pending negotiations with a local irrigation company that diverts water from the Cub River.

Additional flow and fishery data were collected on Pebble Creek (southeastern Idaho), Herd, Iron, Squaw, Big Springs, and Big Timber creeks in central Idaho. Flow recommendations for these streams will be presented to the Board in 1994.

### **Snake River Basin Adjudication**

IDFG continues to be an active participant in the Snake River Basin Adjudication (SRBA) that commenced in 1987. Several basin-wide issues, including the constitutionality of the "accomplished transfer" and the "expansion" statutes, were argued before the SRBA Court (Court) in 1993. The IDFG, as well as many other water right claimants, had relied upon these statutes to support their claims in the SRBA. The Court ruled that these statutes were unconstitutional and "void for vagueness." The decision led to a flurry of new adjudication legislation, including a rewrite of the accomplished transfer and expansion statutes during the 1994 session. As a result of the new legislation, the Court has put a stay on all proceedings in the SRBA until it can evaluate its (legislation) significance.

## **Miscellaneous Water Quantity Issues**

### **Water Right Protests**

IDFG personnel participated in a number of water right protests throughout the state during 1993. One of the most significant protests involved the transfer of more than twenty-five groundwater rights from Bingham, Lincoln, and Minidoka counties to locations in Jefferson, Clark, and Fremont counties. The transfers were for wells that had been drilled illegally in 1986 and for which temporary transfer applications had been approved since 1988. The transfers were issued pending the results of a four-year surface and ground water study conducted by the U. S. Geological Survey (USGS). The study was completed in 1993, but the final report was not available by the time the 1993 irrigation season began. IDWR issued temporary transfers for the water rights for the 1993 season only and required that for future years, the applicant would have to demonstrate that the impacts on water resources projected by the USGS study would not occur or could be mitigated.

### **Conjunctive Water Management**

The current controversy over conjunctive water management was prompted by a suit filed in the SRBA Court by farmers (the "Mussers") in the Hagerman area against the Director of IDWR. The Mussers asked the judge to order IDWR to deliver their full decreed water right from one of the many springs that flow into the Snake River near Hagerman. The Mussers claimed that junior priority ground water diversions from the Snake Plain Aquifer in eastern Idaho were responsible for reducing spring flows that supply their senior (1892) water right. The judge granted the Mussers a Writ of Mandate directing IDWR to deliver the Mussers water in order of their priority. The IDWR appealed the case to the Idaho Supreme Court, and the Court affirmed the SRBA Court decision.

As part of the Mussers' demands, IDWR undertook the development of rules governing the conjunctive management of surface and ground water in Idaho (Appendix 1). Development of these rules has been a long, complex process, and it is ongoing. Many interest groups sought active involvement in crafting the rules, including IDFG. IDWR created an advisory committee representing surface and ground water irrigation, municipal, commercial, and conservation interests to propose the rules for conjunctive management. While IDFG was not an active participant on the committee, we provided numerous written and oral comments on the issues and the draft rules (Appendix 2). IDFG does not believe the rules adequately address concerns for the protection of fish and wildlife resources and has suggested implementation of the rules should be an open, public process.

## **Buck Creek Investigations**

Buck Creek is a fourth-order tributary to Canyon Creek in the Little North Fork Clearwater River drainage (Figure 1). In 1990, IDFG acquired fee-simple title to approximately 4,800 hectares of land in the Canyon Creek and Spotted Louis Creek drainages from Plum Creek Timber Corporation (Plum Creek). The IDFG acquired timber rights on the land except for Section 11, which encompasses the part of the headwaters of Buck Creek. The DAW Forest Products Company purchased the timber rights to Section 11 from Plum Creek and entered into a timber management agreement with IDFG in the spring of 1991. Logging commenced in the summer of 1991.

Beginning in 1990, IDFG collected fish population and habitat data to determine baseline conditions and assess impacts of logging activities in the headwaters of the drainage. The objectives, techniques used and initial findings have been presented in another IDFG report (Reid et al. 1992).

As in 1990 and 1991, westslope cutthroat trout (Oncorhynchus clarki) was the only species observed. Average fish densities per reach in 1993 were less variable than in previous years, ranging from 13.7 to 14.9 fish per 100 square meters. These densities are intermediate to densities of fish observed in 1990 and 1991 (Figure 2). As in 1990, reach number four was not snorkeled. Several different habitat types were snorkeled, but the majority of fish were observed in pools (Table 1). There were considerably more fish observed in the 51-100 and 101-150 mm size classes and fewer fish greater than 150 mm in 1993 than in previous years (Table 2).

Snorkeling in 1993 was conducted in late July, which is intermediate in time to the snorkeling done in 1990 and 1991. This probably accounts for the intermediate densities of fish observed. As previously stated in Reid et al. (1992), westslope cutthroat trout in other northern streams demonstrate a downstream movement during the late summer and early fall; and we believe there is a similar behavioral response occurring in fish in the Buck Creek drainage. Again we noted an absence of fish less than 50 mm in length. As before, habitat where fry would likely abide was not snorkeled in 1993. However, it seems apparent that sufficient reproduction is occurring in Buck Creek, or we would not have observed fish in the intermediate size classes year after year.

We anticipate collecting follow-up data on habitat parameters in Buck Creek in 1994 (similar to 1991), as well as fish abundance data. Efforts will be made to collect additional data in the headwater tributaries, where logging activities were concentrated, to determine impacts related to the harvest activities.

Table 1. Transect dimensions, numbers of fish, and densities of cutthroat trout observed in Buck Creek in 1990, 1991, and 1993.

Year	Reach	Habitat Type	Length (m)	Width (m)	Area (m <sup>2</sup> )	No. fish	Density (fish per 100 m <sup>2</sup> )
1990	1	Pool	14.8	10.4	154.7	42	27.2
		Pool	18.5	5.6	104.5	27	25.8
	2	Pool	12.1	5.2	62.5	10	16.0
		Pool	12.9	6.9	89.0	10	11.2
		Pool	5.1	7.1	41.2	25	60.7
	3	Pool	2.9	8.0	23.2	10	43.1
		Pool	14.7	4.1	61.2	21	34.3
		Pool	20.9	5.8	121.7	12	9.8
		Pool	8.9	3.3	29.7	4	13.5
		Pool	6.5	4.4	28.9	4	13.8
		Pool	7.8	3.0	23.4	3	12.7
		Pool	8.4	3.1	26.0	1	3.8
1991	1	Pool	6.0	5.5	33.0	1	3.0
		Pool/run	7.0	3.0	21.0	5	23.8
		Pool	16.0	15.0	240.0	36	15.0
		Riffle	43.0	12.0	516.0	1	0.2
		Pool	15.0	10.0	150.0	3	2.0
		Pool	15.0	4.0	60.0	20	33.3
	2	Riffle	25.0	7.0	175.0	4	2.0
		Pool	8.0	7.0	56.0	8	14.0
		Riffle	25.0	8.0	200.0	7	3.5
		Pool	16.0	6.0	96.0	5	5.0
		Pool	15.0	6.0	90.0	9	10.0
	3	Pool	10.0	6.0	60.0	12	20.0
		Riffle	25.0	6.0	150.0	5	3.0
		Pool	6.0	7.0	42.0	5	12.0
	4	Pool	5.0	4.0	20.0	4	20.0
		Riffle	16.7	4.4	73.5	2	2.7
		Pool	7.5	4.4	33.0	9	27.0
		Pool	2.0	3.0	6.0	5	83.0
		Pool	5.6	3.4	19.0	8	42.0

Table 1. Continued							
Year	Reach	Habitat Type	Length (m)	Width (m)	Area (m <sup>2</sup> )	No. fish	Density (fish per 100 m <sup>2</sup> )
1993	1	Pool	5.1	6.3	32.1	1	3.1
		Pool	6.2	8.0	44.0	15	34.1
		Run	15.4	5.5	84.7	8	9.4
		Pool	12.0	6.9	82.8	1	1.2
		Run	16.5	7.8	128.7	1	0.8
		Pool	10.0	4.7	47.5	20	42.1
		Riffle	14.8	5.2	77.0	1	1.3
		Pool	7.3	4.2	30.7	10	32.6
		Pool	18.5	15.5	286.8	64	22.3
		Pool	8.9	6.8	60.5	7	11.6
		Pool	11.1	6.1	67.7	8	11.8
		Pool	15.8	8.6	135.9	16	11.8
		Pool	17.1	4.5	77.0	14	18.2
	2	Riffle	38.4	4.9	188.2	1	0.5
		Pool	6.4	7.7	49.3	9	18.3
		Pool	9.1	5.6	51.0	6	11.8
		Pool	8.6	4.0	34.4	9	26.2
		Pool	7.3	7.0	51.1	13	25.4
		Pool	12.3	4.7	57.8	21	36.3
	3	Pool	6.3	4.5	28.4	14	49.3
		Pool	9.4	6.0	56.4	8	14.2
		Pool	18.1	7.5	135.8	8	5.9
		Pool	9.0	8.4	75.6	14	18.5

Table 2. Cutthroat trout densities by individual size classes observed in Buck Creek in 1990, 1991, and 1993.					
Fish Size Class (mm)					
Year	Reach	0-50	51-100	101-150	150+
1990	1	--	1.9	13.6	11.6
		--	1.9	11.5	12.4
	2	--	1.6	6.4	8.0
		--	2.2	5.6	3.3
	3	--	7.3	14.6	38.8
		--	4.3	12.9	25.9
		--	3.3	9.8	21.2
		--	4.1	3.3	2.5
		--	--	--	13.5
		--	--	6.9	6.9
		--	4.2	--	8.5
		--	--	--	3.8
	1991	1	--	--	3.0
			--	14.3	9.5
			--	2.1	8.3
			--	--	0.2
			--	--	1.3
			--	--	0.7
		2	--	--	13.3
			--	--	20.0
			--	1.1	1.1
			--	--	14.6
			--	--	3.5
			--	--	1.0
			--	4.2	4.2
			--	1.1	6.6
		3	--	--	18.3
			--	--	0.7
	4		--	0.7	2.7
			2.3	2.3	7.1
			--	--	5.0
			--	--	15.0
			--	--	2.7
			--	--	27.1
			--	17.0	67.0
			--	5.0	37.1

Table 2. Continued					
Fish Size Class (mm)					
Year	Reach	0-50	51-100	101-150	150+
1993	1	--	--	3.1	--
		--	9.1	11.4	13.6
		--	3.5	4.8	1.2
		--	--	1.2	--
		--	0.8	--	--
		--	12.6	23.2	8.4
		--	1.3	--	--
		--	13.0	19.5	--
		--	8.7	8.7	4.9
		--	3.3	5.0	3.3
		--	4.4	3.0	4.4
		--	3.7	3.7	4.4
		--	7.8	--	10.4
	2	--	0.5	--	--
		--	4.1	6.1	8.1
		--	7.8	3.9	--
		--	11.6	14.5	--
		--	9.8	9.8	5.9
		--	10.4	17.3	8.7
	3	--	21.1	17.6	10.6
		--	7.1	7.1	--
		--	1.5	2.2	2.2
		--	7.9	7.9	2.6



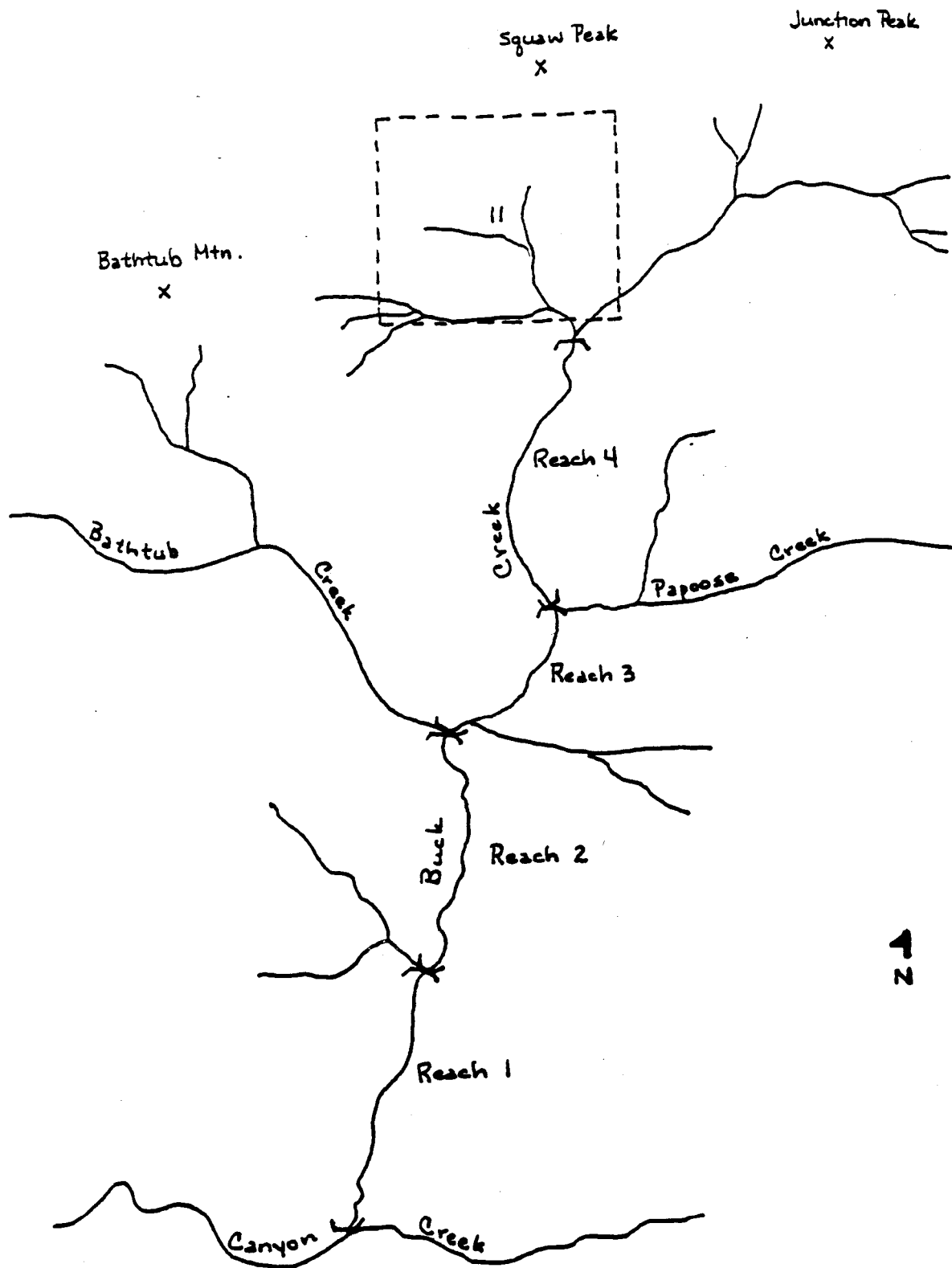


Figure 1. Buck Creek drainage showing reach locations and section 11. Map is not to scale.

# BUCK CREEK CUTTHROAT FISH DENSITIES

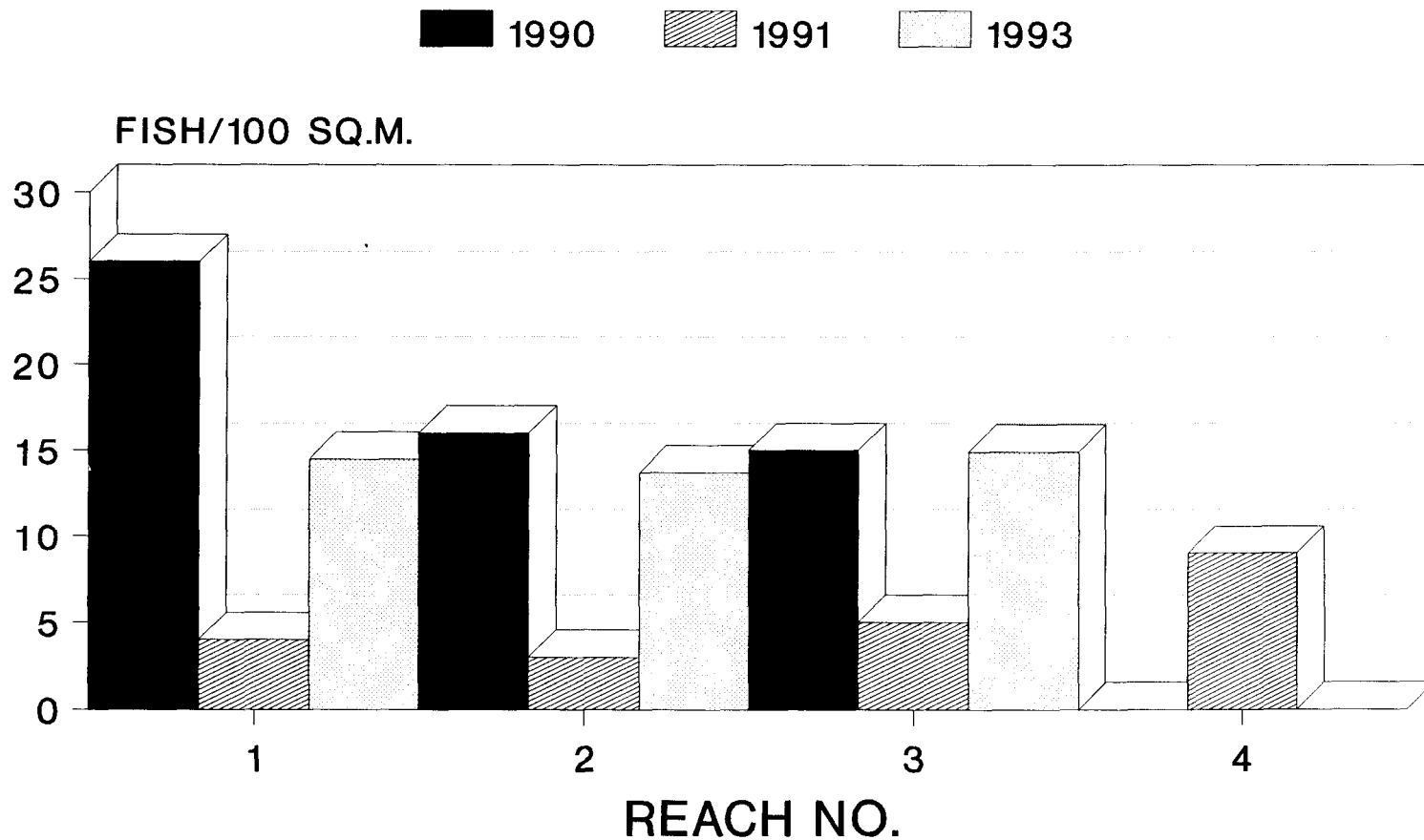


Figure 2. Average cutthroat trout densities (all size classes) by reach and year observed in Buck Creek.



## **APPENDIX 1**



NOTICE OF PROPOSED RULE MAKING

DOCKET NO. 37-0311-9301

DEPARTMENT OF WATER RESOURCES  
RULES GOVERNING CONJUNCTIVE .  
MANAGEMENT OF SURFACE AND GROUND WATER

ACTION: The action, under Docket No. 37-0311-9301, concerns the proposed regular rule making governing Conjunctive Management of Surface and Ground Water, Title 03, Chapter 11.

AUTHORITY: In compliance with Section 67-5221, Idaho Code, the department intends to initiate regular rule making for Conjunctive Management of Surface and Ground Water as authorized in Section 42-603, and Section 42-1805(8), Idaho Code.

DESCRIPTIVE SUMMARY: The following is a statement in nontechnical language of the substance of the intended rules:

The rules prescribe procedures for responding to calls for priority delivery of water made by the holder of a valid senior-priority water right against a valid junior-priority ground water right which diverts from an area of common ground water supply. It is intended that these rules be incorporated into general rules governing water distribution in Idaho when such rules are subsequently adopted.

PUBLIC HEARINGS: The department intends to hold public hearings on the proposed rules as follows:

March 24, 1994 - 1:00 p.m.

Lewiston, Id  
City Hall  
Back Conference Room  
1134 F Street

Weiser, Idaho  
Washington County Courthouse  
Courtroom  
256 E. Court St.

Gooding, Idaho  
Grange Hall  
2148 S. Main St.

Idaho Falls  
City Electric Light Division  
140 S. Capital St  
City Council Meeting Room

March 25, 1994 - 1:00 p.m.

Coeur d'Alene

U.S. Forest Service Bldg  
St. Joe Room 1201  
Ironwood Drive

Boise, Idaho  
Boise Public Library  
Auditorium  
715 S. Capital Blvd

Rupert  
Idaho Nat'l Guard  
Rupert Armory Bldg  
75 E. Hwy 25

Pocatello  
Pocatello Airport  
Upstairs Conf. Rm.  
2036 S. Airport Way

If you require special accommodations in order to attend, participate in or understand the hearing, please advise the department within ten (10) days prior to the hearing.

COMMENT SUBMITTAL: Interested persons may present their views, comments and arguments in writing to the Director on or before April 15, 1994 or may present them orally or in writing at the public hearing. All written comments and data concerning the rules must be directed to the undersigned and must be postmarked or delivered on or before April 15, 1994. Copies of the proposed rules may be obtained upon written request to the Director.

AGENCY CONTACTS: The person designated to represent the agency in this rulemaking proceeding is R. Keith Higginson and such other personnel of the agency as he may designate to assist in this rule-making proceeding.

DATED: February 2, 1994

R. KEITH HIGGINSON, Director  
Department of Water Resources  
1301 N. Orchard St.  
Boise, ID 83706-2237

IDAPA 37  
TITLE 03  
Chapter 11

000. LEGAL AUTHORITY (Rule 0). These rules are promulgated pursuant to Section 42-603, Idaho Code, which provides that the Director of the Department of Water Resources is authorized to adopt rules and regulations for the distribution of water from the streams, rivers, lakes, ground water and other natural water sources as shall be necessary to carry out the laws in accordance with the priorities of the rights of the users thereof. These rules are also issued pursuant to Section 42-1805(8), Idaho Code, which provides the Director with authority to promulgate rules implementing or effectuating the powers and duties of the department. ( )

1. TITLE AND SCOPE (Rule 1). These rules may be cited as "Rules for Conjunctive Management of Surface and Ground Water." The rules prescribe procedures for responding to calls for priority delivery of water made by the holder of a valid senior-priority water right against a valid junior-priority ground water right in an area of common ground water supply. It is intended that these rules be incorporated into general rules governing water distribution in Idaho when such rules are adopted subsequently. ( )

2. WRITTEN INTERPRETATIONS (Rule 2). In accordance with Section 67-5201(16)(b)(iv), Idaho Code, the Department of Water Resources does not have written statements which pertain to the interpretation of the rules of this chapter, or to the documentation of compliance with the rules of this chapter. ( )

3. ADMINISTRATIVE APPEALS (Rule 3). Appeals may be taken pursuant to Section 42-1701A, Idaho Code, and the department's Rules of Procedure, IDAPA 37, Title 01, Chapter 01. ( )

4. SEVERABILITY (Rule 4). The rules governing this chapter are severable. If any rule, or part thereof, or the application of such rule to any person or circumstance is declared invalid, that invalidity does not affect the validity of any remaining portion of this chapter. ( )

5. -- 009. (RESERVED).

010. DEFINITIONS (Rule 10). For the purposes of these rules, the following terms will be used as defined below. ( )

1. Director. The Director of the Department of Water Resources appointed as provided by Section 42-1801, Idaho Code, or his duly delegated designee as provided by Section 42-1701, Idaho Code. ( )

2. Department. The Department of Water Resources created by Section 42-1701, Idaho Code. ( )



3. Conjunctive Management. Legal and hydrologic integration of administration of rights to the use of water from surface and ground water sources.

4. Surface Water Source. Rivers, streams, lakes and springs when flowing in their natural channels as provided in Sections 42-101 and 42-103, Idaho Code. ( )

5. Ground Water Source. All water under the surface of the ground whatever may be the geological structure in which it is standing or moving as provided in Section 42-230(a), Idaho Code. ( )

6. Delivery Call. A request from a water user for administration of water rights under the prior appropriation doctrine. ( )

7. Valid Water Right. The legal right to divert and beneficially use or to protect in place the public waters of the State of Idaho where such right is evidenced by a decree of a court of competent jurisdiction, or a permit or license issued by the Department of Water Resources. For purposes of a delivery call an unadjudicated claim to a water right filed under the provisions of Section 42-243 or under the provisions of Section 42-1409, Idaho Code, when not supported by a decree, permit or license, shall not be considered to be a valid water right. ( )

8. Area of Common Ground Water Supply. A ground water source within which the use of ground water or changes in recharge affect water in a surface water source. ( )

9. Senior-Priority. A water right with a priority date earlier in time than the priority dates of other water rights being considered. ( )

10. Junior-Priority. A water right with a priority date later in time than the priority date of other water rights being considered. ( )

11. Reasonably Anticipated Average Rate of Future Natural Recharge. The estimated average annual volume of water recharged to a ground water source or area of common ground water supply from precipitation, underflow from tributary sources, and stream losses and also water incidentally recharged to a ground water source or area of common ground water supply as a result of the diversion and use of water for irrigation and other purposes. The estimate will be based on the latest available data regarding conditions of development and use of water existing at the time the estimate is made and may vary as these conditions and available information change. ( )

12. Water District. An instrumentality of the State of Idaho created by the Director as provided in Section 42-604, Idaho Code, for the purpose of performing the essential govern-

mental function of distribution of water among appropriators under the laws of the State of Idaho. ( )

13. Watermaster. A person elected and appointed as provided in Section 42-605, Idaho Code, to distribute water within a water district. ( )

14.- Mitigation Plan. A document submitted by a ground water user or group of ground water users and approved by the Director which identifies actions and measures to prevent, or compensate holders of senior-priority water rights for, material injury caused by withdrawal of water from a ground water source or within an area of common ground water supply. ( )

15. Futile Call. A delivery call which, for physical and hydrologic reasons, cannot be satisfied by curtailing diversions under junior-priority water rights or which would result in waste of the public water resource. ( )

16. Material Injury. A use of water under a junior-priority water right will be found to cause material injury to a senior-priority water right if any or all of the following occur: ( )

a. The amount of water available under the senior-priority right will be reduced below the amount recorded by permit, license, decree or valid claim or the historical amount beneficially used by the water right holder under such recorded right, whichever is less; ( )

b. The holder of the senior-priority water right will be forced to an unreasonable effort or expense to divert water under the water right including, in the case of a senior-priority ground water right, the expense of obtaining water from below the reasonable ground water pumping level; or ( )

c. The quality of the water available to the holder of the senior-priority right is made unusable for the purposes of the right and the water cannot be restored to usable quality without unreasonable effort or expense.

17. Full Economic Development of Underground Water Resources. The diversion and use of water from a ground water source for beneficial uses in the public interest at a rate which does not exceed the reasonably anticipated average rate of future natural recharge and which does not result in material injury to valid senior-priority water rights. ( )

18. Artificial Ground Water Recharge. A deliberate and purposeful activity or project which diverts, distributes, injects, stores or spreads water to areas from which such water will enter into and recharge a ground water source or area of common ground water supply. ( )

19. Reasonable Ground Water Pumping Level. A level established by the Director pursuant to Sections 42-226, and

42-237a.g-, Idaho Code, for the purpose of protecting senior-priority ground water users against unreasonable lowering of ground water levels caused by utilization of surface or ground water sources by junior-priority users. ( )

011. -- 019. (RESERVED).

020. GENERAL STATEMENTS OF PURPOSE AND POLICIES FOR CONJUNCTIVE MANAGEMENT (Rule 20). ( )

1. Distribution of water among senior and junior-priority rights. These rules apply to all situations in the state where the use of water under valid junior-priority rights either individually or collectively causes material injury to uses of water under valid senior-priority water rights. The rules govern the distribution of water from ground water sources and areas of common ground water supply. ( )

2. First in time is first in right. These rules acknowledge the principle of "first in time, is first in right" as such principle is defined and interpreted by Idaho statutory and case law, including Section 42-106, Idaho Code, Section 42-226, Idaho Code, and Article XV, Sections 3 and 7, Idaho Constitution. ( )

3. Full economic development of underground water. These rules integrate the administration and use of surface and ground water in a manner that furthers the "full economic development of underground water resources" as set forth in Section 42-226, Idaho Code, and the goal of "optimum development of water resources in the public interest" set forth in Article 15, Section 7, Idaho Constitution. ( )

4. Calls for priority delivery. These rules provide the basis and procedure for responding to delivery calls made by a senior-priority water user against junior-priority water users. The rules partially recognize the principle of the futile call but also acknowledge that ground water use may have some effect, even though not immediately measurable, upon water available to a surface water user in instances where the hydrologic connection may be remote, the resource is large and no direct immediate relief would be achieved even if the ground water use was discontinued. ( )

5. Reasonable exercise of rights. These rules provide the basis for determining the reasonableness of the diversion and use of water by a petitioner with a senior-priority water right who requests priority delivery against a junior-priority water user. The rules also provide the basis for determining the reasonableness of the diversion and use of water by the water user against whom the call is made. ( )

6. Areas of common ground water supplies. These rules provide the basis for the designation of areas of the state which have a common ground water supply and the procedures which will be followed in incorporating such areas of common ground water

supply into existing water districts or creating new districts as provided in Section 42-237a.g., and Section 42-604, Idaho Code. (

7. Sequence of actions for responding to calls for priority de-livery. Rule 30 provides procedures for responding to calls for priority distribution of water within areas of common ground water\_supply which have not been incorporated into a water district. Rule 40 provides similar procedures for responding to calls within water districts where areas of common ground water supply have been incorporated into the district. Rule 50 designates specific known areas of common ground water supply within the state. ( )

8. Reasonably anticipated average rate of future natural recharge. These rules provide for administration of the use of ground water resources to achieve the goal expressed in Section 42-237a.g., Idaho Code, that withdrawals of ground water not exceed the reasonably anticipated average rate of future natural recharge. ( )

9. Saving of defenses. Nothing in these rules shall affect or in any way limit any person's entitlement to assert any defense or claim based upon fact or law in any contested case or other proceeding. ( )

10. Wells as alternate points of diversion for valid water rights to a surface water source. Nothing in these rules shall prohibit any holder of a valid right to water from a surface water source from seeking, pursuant to state law, to change the point of diversion of the water to an inter-connected area of common ground water supply. ( )

11. Preservation of Director's authorities. This chapter shall not be construed to limit the authority of the Director in exercising the duties and responsibilities of the director or the department under law. ( )

021. -- 029. (RESERVED).

030. RESPONSES TO CALLS FOR WATER DELIVERY MADE BY SENIOR-PRIORITY SURFACE OR GROUND WATER RIGHTS AGAINST JUNIOR-PRIORITY GROUND WATER RIGHTS WITHIN AREAS OF THE STATE NOT IN ORGANIZED WATER DISTRICTS OR WITHIN WATER DISTRICTS WHERE GROUND WATER REGULATION HAS NOT BEEN INCLUDED IN THE FUNCTIONS OF SUCH DISTRICTS (Rule 30). ( )

01. Delivery call (petition). When a delivery call is made by a surface or ground water user (petitioner) alleging that by reason of diversion of water by one or more ground water users (respondents) with junior-priority water rights the petitioner is suffering material injury, the petitioner shall file with the Director a petition in writing containing, at least, the following in addition to the information required by Department Rule of Procedure 230: ( )

a. A description of the water rights of the petitioner and of the water diversion and delivery system being used by petitioner. ( )

b. The names and description of the water rights of the ground water users (respondents) who are alleged to be causing material injury to the rights of the petitioner in so far as such information is known by the petitioner. ( )

c. Any information, measurements, data or study results available to the petitioner to support the claim of material injury. ( )

d. In the event petitioner believes material injury is being caused by ground water withdrawals generally within a ground water source or area of common ground water supply, the petition shall describe the ground water source or area of common ground water supply within which petitioner desires junior-priority ground water withdrawals to be regulated. ( )

2. Informal resolution. Upon receipt of a petition including information required by Rule 30.01., the Department may initially consider the matter for informal resolution under the provisions of Section 67-5241, Idaho Code, if doing so will expedite the case without substantially prejudicing the interests of any party. ( )

3. Contested case. If no decision can be reached informally under the provisions of Rule 30.02., the Department will consider the matter as a petition for contested case under the Department's adopted Rules of Procedure, IDAPA 37.01.01. The petitioner shall serve the petition upon all known respondents as required by Department Rule of Procedure 203. In addition to such direct service by petitioner, the Department will give such general notice by publication or news release as will advise ground water users within the petitioned area of the matter. ( )

4. Petition for modification of an existing water district. In the event the petition proposes regulation of ground water rights conjunctively with surface water rights in an organized water district, the Department may consider such to be a petition for modification of the organized water district and notice of proposed modification of the water district shall be provided by the Director pursuant to Section 42-604, Idaho Code. The Department will proceed to consider the matter addressed by the petition under the Department's Rules of Procedure. ( )

5. Petition for creation of a new water district. In the event the petition proposes regulation of ground water rights from a ground water source or conjunctively with surface water rights within an area of common ground water supply which is not in an existing water district, the Department may consider such to be a petition for creation of a water district and notice of proposed creation of a water district shall be provided by the

Director pursuant to Section 42-604, Idaho Code. The Department will proceed to consider the matter under the Department's Rules of Procedure. ( )

06. Order. Following consideration of the contested **case** under the Department's Rules of Procedure, the Director may, by order, take any or all of the following actions: ( )

a. Deny the petition in whole or in part; ( )

b. Grant the petition in whole or in part or upon conditions; ( , )

c. Determine an area of common ground water supply which affects the water in a surface water source in an organized water district; ( )

d. Incorporate an area of common ground water supply into an organized water district following the procedures of Section 42-604, Idaho Code, provided that the rights of the ground water users who would be incorporated into the water district have been adjudicated; ( )

e. Create a separate water district following the procedures of Section 42-604, Idaho Code, provided that the rights of the surface and ground water users who would be included in the separate water district have been adjudicated; ( )

f. Determine the need for an adjudication of the priorities and permissible rates and volumes of diversion and consumptive use under the surface and ground water rights of the petitioner and respondents and initiate such adjudication; or ( )

g. By summary order as provided in Section 42-237a.g., Idaho Code, prohibit or limit the withdrawal of water from any well during any period it is determined that water to fill any water right is not there available without causing ground water levels to be drawn below the reasonable ground water pumping level, or would affect the present or future use of any prior surface or ground water right or result in the withdrawing of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge. ( )

07. Orders for interim administration. For the purposes of Rules 30.06.d. and 30.06.e., an outstanding order for interim administration of water rights issued by the court pursuant to Section 42-1417, Idaho Code, in a general adjudication proceeding shall be considered as an adjudication of the rights involved. ( )

08. Administration pursuant to Rule 40. Upon a finding of an area of common ground water supply and upon the incorporation of such area into an organized water district, or the creation of a separate water district, the use of water shall be

administered in accordance with the priorities of the various  
water rights as provided in Rule 40. ( )

031. DETERMINING AREAS OF COMMON GROUND WATER SUPPLY WHICH  
AFFECT THE FLOW OF WATER IN A SURFACE WATER SOURCE (Rule 31).

( )  
01. Director to consider information. The Director will  
consider all available data and information which describes the  
relationship between ground water and surface water in making  
a finding of an **area** of common ground water supply. ( )

02. Kinds of information. The information considered may  
include any or all of the following: ( )

a. Water level measurements, studies, reports, computer  
simulations, pumping tests, hydrographs of stream flow and ground  
water levels and other such data; and ( )

b. The testimony and opinion of expert witnesses at a  
hearing on a petition for expansion of a water district or orga-  
nization of a new water district. ( )

03. Criteria for findings. A ground water source will be  
determined to be an area of common ground water supply if:  
( )

a. The ground water source supplies water to the sur-  
face water source; or ( )

b. Withdrawal of water from the ground water source  
will cause water to move from the surface water source to the  
ground water source. ( )

04. Reasonably anticipated average rate of future natural  
recharge. The Director will estimate the reasonably anticipated  
average rate of future natural recharge for an area of common  
ground water supply. ( )

05. Findings. The findings of the Director shall be  
included in the Order issued pursuant to Rule 30.06. ( )

032. -- 039. (RESERVED).

040. RESPONSES TO CALLS FOR WATER DELIVERY MADE BY SENIOR-PRIORITY  
SURFACE OR GROUND WATER RIGHTS AGAINST JUNIOR-PRIORITY GROUND WATER  
RIGHTS FROM GROUND WATER SOURCES OR AREAS OF COMMON GROUND WATER  
SUPPLY IN AN ORGANIZED WATER DISTRICT (Rule 40).

( )

01. Responding to a delivery call. When a delivery call  
is made by a senior-priority water user (petitioner) alleging  
that by reason of diversion of water by one or more junior-  
priority ground water users (respondents) from a ground water  
source or an area of common ground water supply in an organized  
water district the petitioner is suffering material injury and

upon a finding by the Director as provided in Rule 40.05. that material injury is occurring, the Director, through the watermaster, shall: ( )

a. Regulate uses of water in accordance with the priorities of rights of the various surface or ground water users whose rights are included within the district, provided, that regulation of junior-priority ground water pumping where the injury is indirect or long range may, by order of the Director, be phased-in over not more than a five-year period to lessen the economic impact of immediate and complete curtailment; or ( )

b. Allow out-of-priority diversion of water by juniorpriority ground water users pursuant to a mitigation plan which has been approved by the Director. ( )

02. Regulation of uses of water by watermaster. The Director, through the watermaster, shall regulate use of water within the water district pursuant to the priorities of water rights under the following procedures: ( )

a. The watermaster shall determine the quantity of surface water of the stream which is available for diversion and shall shut the headgates of junior-priority surface water users as necessary to assure that water is being used in accordance with the respective water rights from the surface water source.

b. The watermaster shall regulate the use of ground water in accordance with the rights thereto, approved mitigation plans and orders issued by the Director. ( )

c. Where a call is made by a senior-priority surface water user against a junior-priority ground water user in the water district the watermaster shall first determine whether a mitigation plan has been approved by the Director whereby diversion of ground water may be allowed to continue out of priority order. If the ground water user is a participant in such approved mitigation plan, and is operating in conformance therewith, the watermaster shall allow the ground water use to continue out of priority. ( )

d. The watermaster shall maintain records of the diversions of water by surface and ground water users within the water district and records of water provided under the approved mitigation plan which shall be compiled into the annual report which is required by Section 42-606, Idaho Code. ( )

e. Under the direction of the Department, watermasters of separate water districts shall cooperate and reciprocate in assisting each other in assuring that diversion and use of water under valid water rights is administered in a manner to assure protection of senior-priority water rights provided the relative priorities of the water rights within the separate water districts have been adjudicated. ( )



3. Reasonable exercise of rights. In determining whether diversion and use of water under rights will be regulated under Rules 40.01.a., or 40.01.b., the Director shall consider whether the petitioner's senior-priority water right making the call is suffering injury and using water efficiently and without waste. The director will also consider whether the respondent junior-priority water right is using water efficiently and without waste. - ( )

4. Determining injury and reasonableness of surface diversions. Factors the Director may consider in determining whether a senior-priority surface water right holder is suffering material injury and using water efficiently and without waste include, but are not limited to, the following: ( )

a. Whether the exercise of junior-priority ground water rights individually or collectively affects the quantity and timing of when water is available to, and the cost of exercising, a senior-priority surface water right. This may include the seasonal as well as the multi-year and cumulative impacts of all ground water withdrawals from the area of common ground water supply. ( )

b. If for irrigation, the rate of diversion compared to the acreage of land served, the annual volume of water diverted, and the method of irrigation water application. ( )

c. The amount of water being diverted and used compared to the rights held by the senior-priority surface water right. ( )

d. The existence of water measuring and recording devices. ( )

e. The extent to which the requirements of the senior-priority surface water right could be met with the user's existing facilities and water supplies by employing reasonable diversion and conveyance efficiency and conservation practices. Consideration will be given to the need to retain reasonable amounts of carry-over storage to assure water supplies for future dry years. ( )

f. The extent to which the requirements of the senior-priority surface water right could be met using alternate reasonable means of diversion including the construction of wells to utilize water from the common ground water supply under the petitioner's surface water right priority. A surface water appropriator is not entitled to command the entirety of large volumes of ground water in an aquifer to support his appropriation contrary to the public policy of full economic development of underground water resources set forth in Section 42-226, Idaho Code. However, changes to alternate points of diversion will not be allowed to injure other water rights or exacerbate the decline of ground water levels. ( )

g. The holder of a senior-priority surface water right will be prevented from requiring curtailment of pumping of any well used by a junior-priority ground water right where use of water under the junior-priority right is covered by an approved mitigation plan. Where a particular junior-priority ground water diversion directly and substantially interferes with the water supply of a prior surface water right, the mitigation plan must replace or compensate for the direct effects of the ground water diversion on the surface water supply. ( )

05. Determining reasonableness of ground water diversions. Factors the Director may consider in determining whether a senior or junior ground water right holder is using water with reasonable efficiency and without waste include, but are not limited to, the following: ( )

a. If for irrigation, the rate of diversion compared to the acreage of land served, the annual volume of water pumped, and the method of irrigation water application. ( )

b. The amount of water being pumped and used compared to the rights held by the pumper. ( )

c. The existence of measuring and recording devices. ( )

06. Domestic and stock watering ground water rights exempt. A delivery call shall not be effective against any ground water right used for domestic purposes regardless of priority date where such domestic use is within the limits of the definition set forth in Section 42-111, Idaho Code, nor against any ground water right used for stock watering where such stock watering use is within the limits of the definition set forth in Section 42-1401A(12), Idaho Code. ( )

07. Mitigation plan. A proposed mitigation plan shall be submitted to the Director in writing and shall contain the following information: ( )

a. The name and mailing address of the person or persons proposing the plan. ( )

b. Identification of the water rights of the person or persons proposing the plan. ( )

c. A description of the plan setting forth the water supplies proposed to be used for mitigation and any circumstances or limitations on the availability of such supplies. ( )

d. Such information as shall allow the Director to evaluate the factors set forth in Rule 40.09. ( )

08. Notice and hearing. Upon receipt of a proposed mitigation plan the Director will provide notice, hold a hearing as determined necessary, and consider the plan under the procedural

provisions of Section 42-222, Idaho Code, in the same manner as applications to transfer water rights. ( )

09. Factors to be considered. Factors that may be considered by the Director in determining whether a proposed mitigation plan will prevent injury to senior rights include, but are not limited to, the following: ( )

a. Whether delivery of water pursuant to the mitigation plan is in compliance with state law. ( )

b. Whether the mitigation plan will provide. Replacement water, at the time and place required by the senior right, sufficient to offset the depletive effect of ground water withdrawal on the water available in the surface water source at such time and place as necessary to satisfy the rights of diversion from the surface water source. Consideration will be given to the history and seasonal availability of water for diversion so as not to require replacement water at times when the surface right has not historically received a full supply, such as during annual low-flow periods and extended drought periods. ( )

c. Whether the mitigation plan provides for replacement of water supplies or other appropriate compensation to the senior appropriator when needed during a time of shortage even if the effect of pumping is spread over many years and will continue for years after pumping is curtailed. A mitigation plan may allow for multi-season accounting for ground water withdrawals and provision of replacement water to take advantage of variability in seasonal water supply. The mitigation plan must include contingency provisions to assure protection of the senior-priority right in the event the mitigation water source becomes unavailable. ( )

d. Whether the mitigation plan proposes artificial recharge of a ground water source or area of common ground water supply as a means of protecting ground water pumping levels or compensating senior-priority water rights. ( )

e. Where a mitigation plan is based upon computer simulations and calculations, whether such plan uses generally accepted and appropriate engineering and hydrogeologic formulae for calculating the depletive effect of the ground water withdrawal. ( )

f. Whether the mitigation plan uses generally accepted and appropriate values for aquifer characteristics such as transmissivity, specific yield, and other relevant factors. ( )

g. Whether the mitigation plan reasonably calculates the consumptive use component of the ground water withdrawal. ( )

h. The reliability of the source of replacement water over the term in which it is proposed to be used under the mitigation plan. ( )

i. Whether the mitigation plan proposes enlargement of the rate of diversion, seasonal quantity or time of diversion under any water right being proposed for use in the mitigation plan. - ( )

j. Whether the mitigation plan is consistent with the conservation of water resources, the public interest or injures other water rights. ( )

k. Whether the mitigation plan provides for monitoring and adjustment as necessary to protect senior rights from injury. ( )

l. Whether the plan provides for mitigation of the effects of pumping of existing wells and the effects of pumping of any new wells which may be proposed to take water from the areas of common ground water supply. ( )

m. Whether the mitigation plan provides for future participation on an equitable basis by ground water pumpers who divert water under junior priority rights who do not initially participate in such mitigation plan but who subsequently elect to do so. ( )

n. A mitigation plan may propose division of the area of common ground water supply into zones or segments for the purpose of consideration of local impacts and replacement supplies. ( )

o. Whether the petitioners and respondents have entered into an agreement on an acceptable mitigation plan even though such plan may not otherwise be fully in compliance with these provisions. ( )

10. Actions of the watermaster under a mitigation plan. Where a mitigation plan has been approved as provided in Rule 40.09, the watermaster may permit the use of ground water to continue out of priority order within the water district provided the junior-priority ground water user operates in accordance with such approved mitigation plan. ( )

11. Curtailment of use where mitigation plan not effective. Where a mitigation plan has been approved and the junior-priority ground water user fails to operate in accordance with such approved plan, the watermaster will notify the Director who will immediately issue cease and desist orders and direct the watermaster to terminate the out-of-priority use of ground water rights otherwise benefitting from such plan or take such other actions as provided in the mitigation plan to ensure protection of senior-priority water rights. ( )

12. Collection of assessments within water district. Where a mitigation plan has been approved, the watermaster of the water district shall be empowered to include the costs of administration of the plan within the annual operation budget of the district, to provide for the collection of assessment of ground water users as provided by the plan, to collect the assessments and expend funds for the operation of the plan, and to maintain records of the volumes of water made available by the plan and the disposition of such water. ( )

041. -- 049. (RESERVED).

050. AREAS DETERMINED TO HAVE A COMMON GROUND WATER SUPPLY WHICH AFFECTS THE FLOW OF WATER IN A SURFACE WATER SOURCE (Rule 50). ( )

01. Eastern Snake Plain Aquifer. The area of coverage of this rule is the Eastern Snake Plain Aquifer and interconnected stream systems within Idaho as the aquifer is defined in the report, Hydrology and Digital Simulation of the Regional Aquifer System, Eastern Snake River Plain, Idaho, USGS Professional Paper 1408-F, 1992. ( )

a. The Eastern Snake Plain Aquifer supplies water to and receives water from the Snake River. ( )

b. The Eastern Snake Plain Aquifer is found to be an area of common ground water supply which affects the flow of water in the Snake River upstream of the USGS gaging station at King Hill, Idaho. ( )

c. The reasonably anticipated average rate of future natural recharge of the Eastern Snake Plain Aquifer is found to be (1980 conditions):

Surface-water irrigation	4.84 MAF
Tributary basins	1.44 MAF
Precipitation	.70 MAF
SNAKE RIVER LOSSES	.69 MAF
Tributary-stream and canal losses	.39 MA
	<hr/>
Total	8.06 MAF

( )

d. The Eastern Snake Plain Aquifer area of common ground water supply will be created as a separate water district or incorporated into an existing or expanded water district as provided in Section 42-604, Idaho Code, when the rights to the diversion and use of water from the aquifer have been adjudicated. ( )

051. -- 999. (RESERVED).



**State of Idaho**  
**DEPARTMENT OF WATER RESOURCES**

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000  
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS  
GOVERNOR

R. KEITH HIGGINSON  
DIRECTOR

TO: THOSE ON THE MAILING LIST  
FROM: R. KEITH HIGGINSON, DIRECTOR *RKH*  
RE: TEMPORARY RULES FOR CONJUNCTIVE MANAGEMENT  
DATE: APRIL 6, 1994

---

Enclosed is a copy of temporary rules for conjunctive management that have been adopted to provide a basis for IDWR to respond to "calls" if any are received this irrigation season. The rules will remain in effect for a maximum period of 189 days. The order adopting the temporary rules also extends the period for public comment on permanent rules until July 15, 1994. Promulgation of permanent rules will be aided by having more time to fully review recently passed legislation, recent court decisions and the comments received during the hearing process.

The temporary rules are based upon the draft rules and include revisions suggested by an ad hoc committee requested by the legislative resource committee chairmen. Issues of law are not defined in the rules and are left for future resolution.

Thank you for your interest in the management of Idaho's water resources. I will endeavor to keep you informed as the permanent rules are developed and promulgated.

MAILING LIST: Advisory committee members  
Resource committee members  
Attorneys serving on Terry Uhling's committee  
Mailing list for rules adoption

**NOTICE OF  
TEMPORARY RULES**

Docket No. 37-0311-9301

Department of Water Resources

Rules Governing Conjunctive  
Management of Surface and Ground Water

**ACTION:** The action, under Docket No. 37-0311-9301, concerns temporary rule making governing Conjunctive Management of Surface and Ground Water, Title 03, Chapter 11.

**AUTHORITY:** In compliance with Section 67-5226, Idaho Code, and Department Rule of Procedure No. 840, the department has adopted temporary rules governing the Conjunctive Management of Surface and Ground Water as authorized in Section 42-603, and Section 42-1805(8), Idaho Code.

**DESCRIPTIVE SUMMARY:** The following is a statement in nontechnical language of the substance of the intended rules:

The rules prescribe procedures for responding to a call for priority delivery of water made by the holder of a senior-priority water right against a junior-priority ground water right which diverts from an area of common ground water supply. The department is also in the process of adopting permanent rules for conjunctive management.

**EFFECTIVE DATE:** April 4, 1994.

**AGENCY CONTACTS:** The person designated to represent the agency in this rulemaking proceeding is R. Keith Higginson and such other personnel of the agency as he may designate to assist in this rule-making proceeding.

R. KEITH HIGGINSON, Director  
Department of Water Resources  
1301 N. Orchard St.  
Boise, ID 83706-2237

Division of Statewide  
Administrative Rules  
Office of the State Auditor  
RECEIVED AND FILED

APR 4 1994

DOCKET NO. 37-0311-9301

BEFORE THE DEPARTMENT OF WATER RESOURCES  
OF THE STATE OF IDAHO

IN THE MATTER OF ADOPTION OF)  
TEMPORARY RULES FOR THE )  
CONJUNCTIVE MANAGEMENT OF )  
SURFACE AND GROUND WATER )  
\_\_\_\_\_)

ORDER  
ADOPTING TEMPORARY RULES  
AND  
EXTENDING COMMENT PERIOD

FINDINGS

Section 42-603 and Section 42-1805(8), Idaho Code, authorize the Director of the Department of Water Resources (Director) to promulgate rules for the distribution of water.

Section 67-5226, Idaho Code, and Department Rule of Procedure No. 840 provide for the adoption of temporary rules if it is reasonably necessary to protect the public welfare or to comply with amendments to governing law.

In order to have conjunctive management water distribution rules effective at the start of the 1994 irrigation season and in order to comply with governing law as construed by the district court, it is necessary for the Director to adopt temporary rules.


The Department of Water Resources is in the process of adopting permanent rules for conjunctive management under Docket No. 37-0311-9301. The present comment period in this rule making expires April 15, 1994.

ORDER

NOW, THEREFORE, IT IS ORDERED that the Director of the Department of Water Resources, hereby adopts the attached temporary rules for the Conjunctive Management of Surface and Ground Water effective on the date of this order.

IT IS FURTHER ORDERED that the comment period for permanent rule making under Docket No. 37-0311-9301 is extended to July 15, 1994.

Signed this 4<sup>TH</sup> day of April, 1994.

  
\_\_\_\_\_  
R. KEITH HIGGINSON  
Director



IDAPA 37  
TITLE 03  
Chapter 11

000. LEGAL AUTHORITY (Rule 0). These temporary rules are promulgated pursuant to Idaho Code Section 67-5226 of the Idaho Administrative Procedure Act and Section 42-603, Idaho Code, which provides that the Director of the Department of Water Resources is authorized to adopt rules and regulations for the distribution of water from the streams, rivers, lakes, ground water and other natural water sources as shall be necessary to carry out the laws in accordance with the priorities of the rights of the users thereof. These rules are also issued pursuant to Section 42-1805(8), Idaho Code, which provides the Director with authority to promulgate rules implementing or effectuating the powers and duties of the department.

1. TITLE AND SCOPE (Rule 1). These temporary rules may be cited as "Temporary Rules for Conjunctive Management of Surface and Ground Water." The rules prescribe procedures for responding to calls for priority delivery of water made by the holder of a senior-priority water right against a junior-priority ground water right in an area of common ground water supply. It is intended that these rules be incorporated into general rules governing water distribution in Idaho when such rules are adopted subsequently.

2. WRITTEN INTERPRETATIONS (Rule 2). In accordance with Section 67-5201(16)(b)(iv), Idaho Code, the Department of Water Resources does not have written statements which pertain to the interpretation of the rules of this chapter, or to the documentation of compliance with the rules of this chapter.

3. ADMINISTRATIVE APPEALS (Rule 3). Appeals may be taken pursuant to Section 42-1701A, Idaho Code, and the department's Rules of Procedure, IDAPA 37, Title 01, Chapter 01.

4. SEVERABILITY (Rule 4). The rules governing this chapter are severable. If any rule, or part thereof, or the application of such rule to any person or circumstance is declared invalid, that invalidity does not affect the validity of any remaining portion of this chapter.

005.---009. (RESERVED)

010. DEFINITIONS (Rule 10). For the purposes of these rules, the following terms will be used as defined below.

01. Director. The Director of the Department of Water Resources appointed as provided by Section 42-1801, Idaho Code, or an employee of the Department who has been delegated to act for the Director as provided by Section 42-1701, Idaho Code.

2. Department. The Department of Water Resources created by Section -42-1701, Idaho code.
3. Conjunctive Management. Legal and hydrologic integration of administration of rights to the use of water from surface and ground water sources.
4. Surface Water Source. Rivers, streams, lakes and springs when flowing in their natural channels. (Sections 42-101 and 42-103, Idaho Code)
5. Ground Water Source. All water under the surface of the ground whatever may be the geological structure in which it is standing or moving. (Section 42-230(a), Idaho Code)
6. Delivery Call. A request from a water user for administration of water rights under the prior appropriation doctrine.
7. Water Right. The legal right to divert and beneficially use or to protect in place the public waters of the State of Idaho where such right is evidenced by a decree, a permit or license issued by the Department, or a beneficial use right.
8. Area of Common Ground Water Supply. A ground water source within which the use of ground water or changes in recharge affect water in a surface water source.
9. Senior-Priority. A water right with a priority date earlier in time than the priority dates of other water rights being considered.
10. Junior-Priority. A water right with a priority date later in time than the priority date of other water rights being considered.
11. Reasonably Anticipated Average Rate of Future Natural Recharge. The estimated average annual volume of water recharged to a ground water source or area of common ground water supply from precipitation, underflow from tributary sources, and stream losses and also water incidentally recharged as a result of the diversion and use of water for irrigation and other purposes. The estimate will be based on available data regarding conditions of development and use of water existing at the time the estimate is made and may vary as these conditions and the available information change.
12. Water District. An instrumentality of the State of Idaho created by the Director as provided in Section 42-604, Idaho Code, for the purpose of performing the essential governmental function of distribution of the available water among appropriators under Idaho law.

13. Watermaster. A person elected and appointed as provided in Section 42-605, Idaho Code, to distribute water within a water district.

14. Mitigation Plan. A document submitted by a ground water user or group of ground water users and approved by the Director which identifies actions and measures to prevent, or compensate holders of senior-priority water rights for, material injury to a water right caused by withdrawal of water from a ground water source or within an area of common ground water supply.

15. Futile Call. A delivery call which, for physical and hydrologic reasons, cannot be satisfied within a reasonable time of the call by curtailing diversions under junior-priority water rights.

16. Material Injury. A use of water under a junior-priority water right will be found to cause material injury to a senior-priority water right in accordance with Idaho law, through the process described in Rules 30.01 and 40.04.

17. Full Economic Development of Underground Water Resources. The diversion and use of water from a ground water source for beneficial uses in the public interest at a rate which does not exceed the reasonably anticipated average rate of future natural recharge and, in a manner which does not result in material injury to senior-priority water rights and which furthers the principle of reasonable utilization of ground and surface waters as set forth in Rule 20.03.

18. Artificial Ground Water Recharge. A deliberate and purposeful activity or project which diverts, distributes, injects, stores or spreads water to areas from which such water will enter into and recharge a ground water source or area of common ground water supply.

19. Reasonable Ground Water Pumping Level. A level established by the Director either generally for an area or aquifer or for individual water rights on a case-by-case basis, for the purpose of protecting senior-priority ground water users against unreasonable lowering of ground water levels caused by utilization of surface or ground water sources by junior-priority users.

20. Idaho Law. The constitution, statutes, rules and case law of Idaho.

011.---019. (RESERVED)

020. GENERAL STATEMENTS OF PURPOSE AND POLICIES FOR CONJUNCTIVE MANAGEMENT (Rule 20).

1. Distribution of water among senior and junior-priority rights. These rules apply to all situations in the state where the use of water under junior-priority water rights either individually or collectively causes material injury to uses of water under senior-priority water rights. The rules govern the distribution of water from ground water sources and areas of common ground water supply.
2. Prior Appropriation Doctrine. These rules acknowledge all elements of the prior appropriation doctrine as established by Idaho law.
3. Reasonable utilization of surface and ground water. These rules integrate the administration and use of surface and ground water in a manner consistent with the traditional policy of reasonable use of both surface and ground water. The policy of reasonable use includes the concepts of optimum development, full economic development and maximum use as defined by Idaho law. An appropriator is not entitled to command the entirety of large volumes of ground water in an aquifer to support his appropriation contrary to the public policy of reasonable use of water as described in this rule.
4. Calls for priority delivery. These rules provide the basis and procedure for responding to delivery calls made by a senior-priority water user against junior-priority water users. The principle of futile call applies to the distribution of water under these rules. Although a call may be denied under the futile call doctrine, these rules may require mitigation if ground water use has some appreciable effect, even though not immediately measurable, upon water available to a surface water user in instances where the hydrologic connection may be remote, the resource is large and no direct immediate relief would be achieved even if the ground water use was discontinued.
5. Reasonable exercise of rights. These rules provide the basis for determining the reasonableness of the diversion and use of water by both the senior-priority water right user who requests priority delivery against a junior-priority water user and use of water by the water user against whom the call is made.
6. Areas of common ground water supplies. These rules provide the basis for the designation of areas of the state which have a common ground water supply and the procedures which will be followed in incorporating such areas of common ground water supply into existing water districts or creating

new districts as provided in Section 42-237a.g., and Section 42-604, Idaho Code.

7. Sequence of actions for responding to calls for priority delivery.- Rule 30 provides procedures for responding to calls for priority distribution of water within areas of common ground water supply which have not been incorporated into a water district. Rule 40 provides similar procedures for responding to calls within water districts where areas of common ground water supply have been incorporated into the district. Rule 50 designates specific known areas of common ground water supply within the state.

8. Reasonably anticipated average rate of future natural recharge. These rules provide for administration of the use of ground water resources to achieve the goal that withdrawals of ground water not exceed the reasonably anticipated average rate of future natural recharge. (Section 42-237a.g., Idaho Code)

9. Saving of defenses. Nothing in these rules shall affect or in any way limit any person's entitlement to assert any defense or claim based upon fact or law in any contested case or other proceeding.

10. Wells as alternate points of diversion for water rights to a surface water source. Nothing in these rules shall prohibit any holder of a water right from a surface water source from seeking, pursuant to Idaho law, to change the point of diversion of the water to an inter-connected area of common ground water supply.

11. Preservation of Director's authorities. This chapter shall not be construed to limit the authority of the Director in exercising the duties and responsibilities of the director or the department under law.

021---029 (RESERVED)

030. RESPONSES TO CALLS FOR WATER DELIVERY MADE BY SENIOR-PRIORITY SURFACE OR GROUND WATER RIGHTS AGAINST JUNIOR-PRIORITY GROUND WATER RIGHTS WITHIN AREAS OF THE STATE NOT IN ORGANIZED WATER DISTRICTS OR WITHIN WATER DISTRICTS WHERE GROUND WATER REGULATION HAS NOT BEEN INCLUDED IN THE FUNCTIONS OF SUCH DISTRICTS (Rule 30).

01. Delivery call (petition). When a delivery call is made by a surface or ground water user (petitioner) alleging that by reason of diversion of water by one or more ground water users (respondents) with junior-priority water rights the petitioner is suffering material injury, the petitioner shall file with the Director a petition in writing containing, at

least, the following in addition to the information required by Department Rule of Procedure 230:

a. A description of the water rights of the petitioner including a listing of the decree, license, claim or other documentation of such right, the water diversion and delivery system being used by petitioner, and the beneficial use being made of the water.

b. The names, addresses and description of the water rights of the ground water users (respondents) who are alleged to be causing material injury to the rights of the petitioner in so far as such information is known by the petitioner.

c. Any information, measurements, data or study results available to the petitioner to support the claim of material injury.

d. In the event petitioner believes material injury is being caused by ground water withdrawals generally within a ground water source or area of common ground water supply, the petition shall describe the ground water source or area of common ground water supply within which petitioner desires junior-priority ground water withdrawals to be regulated.

2. Informal resolution. Upon receipt of a petition including information required by Rule 30.01., the Department may initially consider the matter for informal resolution under the provisions of Section 67-5241, Idaho Code, if doing so will expedite the case without substantially prejudicing the interests of any party.

3. Contested case. If no decision can be reached informally under the provisions of Rule 30.02., the Department will consider the matter as a petition for contested case under the Department's adopted Rules of Procedure, IDAPA 37.01.01. The petitioner shall serve the petition upon all known respondents as required by Department Rule of Procedure 203. In addition to such direct service by petitioner, the Department will give such general notice by publication or news release as will advise ground water users within the petitioned area of the matter.

4. Petition for modification of an existing water district. In the event the petition proposes regulation of ground water rights conjunctively with surface water rights in an organized water district, the Department may consider such to be a petition for modification of the organized water district and notice of proposed modification of the water district shall be provided by the Director pursuant to Section 42-604, Idaho

Code. The Department will proceed to consider the matter addressed by the petition under the Department's Rules of Procedure.

5. Petition for creation of a new water district. In the event the petition proposes regulation of ground water rights from a ground water source or conjunctively with surface water rights within an area of common ground water supply which is not in an existing water district, the Department may consider such to be a petition for creation of a water district and notice of proposed creation of a water district shall be provided by the Director pursuant to Section 42-604, Idaho Code. The Department will proceed to consider the matter under the Department's Rules of Procedure.

6. Order. Following consideration of the contested case under the Department's Rules of Procedure, the Director may, by order, take any or all of the following actions:

- a. deny the petition in whole or in part;
- b. grant the petition in whole or in part or upon conditions;
- c. determine an area of common ground water supply which affects the water in a surface water source in an organized water district;
- d. incorporate an area of common ground water supply into an organized water district following the procedures of Section 42-604, Idaho Code, provided the water rights of the ground water users which would be included in the water district have been adjudicated;
- e. create a separate water district following the procedures of Section 42-604, Idaho Code, provided the water rights to be included in the separate water district have been adjudicated;
- f. determine the need for an adjudication of the priorities and permissible rates and volumes of diversion and consumptive use under the surface and ground water rights of the petitioner and respondents and initiate such adjudication; or
- g. by order as provided in Section 42-237a.g., Idaho Code, prohibit or limit the withdrawal of water from any well during any period it is determined that water to fill any water right is not there available without causing ground water levels to be drawn below the reasonable ground water pumping level, or would affect the present or future use of any prior surface or ground

water right or result in the withdrawing of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge.

7. Orders for interim administration. For the purposes of Rules 30.06.d. and 30.06.e., an outstanding order for interim administration of water rights issued by the court pursuant to Section 42-1417, Idaho Code, in a general adjudication proceeding shall be considered as an adjudication of the rights involved.

8. Administration pursuant to Rule 40. Upon a finding of an area of common ground water supply and upon the incorporation of such area into an organized water district, or the creation of a separate water district, the use of water within the district shall be administered in accordance with the priorities of the various water rights as provided in Rule 40.

031. DETERMINING AREAS OF COMMON GROUND WATER SUPPLY WHICH AFFECT THE FLOW OF WATER IN A SURFACE WATER SOURCE (Rule 31).

01. Director to consider information. The Director will consider all available data and information which describes the relationship between ground water and surface water in making a finding of an area of common ground water supply.

02. Kinds of information. The information considered may include any or all of the following:

a. water level measurements, studies, reports, computer simulations, pumping tests, hydrographs of stream flow and ground water levels and other such data; and

b. the testimony and opinion of expert witnesses at a hearing on a petition for expansion of a water district or organization of a new water district.

03. Criteria for findings. A ground water source will be determined to be an area of common ground water supply if:

a. the ground water source supplies water to the surface water source; or

b. withdrawal of water from the ground water source will cause water to move from the surface water source to the ground water source.

04. Reasonably anticipated average rate of future natural recharge. The Director will estimate the reasonably anticipated average rate of future natural recharge for an area of common ground water supply.



5. Findings. The findings of the Director shall be included in the Order issued pursuant to Rule 30.06.

6. Other authorities remain applicable. Nothing in these rules shall limit the Director's authority to take alternative or additional actions relating to the management of Idaho's water resources, including, without limitation, those actions available under statutes and rules pertaining to the establishment of ground water management areas and critical ground water areas.

032---039 (RESERVED)

040. RESPONSES TO CALLS FOR WATER DELIVERY MADE BY SENIOR-PRIORITY SURFACE OR GROUND WATER RIGHTS AGAINST JUNIOR-PRIORITY GROUND WATER RIGHTS FROM GROUND WATER SOURCES OR AREAS OF COMMON GROUND WATER SUPPLY IN AN ORGANIZED WATER DISTRICT (Rule 40).

01. Responding to a delivery call. When a delivery call is made by a senior-priority water user (petitioner) alleging that by reason of diversion of water by one or more junior-priority ground water users (respondents) from a ground water source or an area of common ground water supply in an organized water district the petitioner is suffering material injury and upon a finding by the Director as provided in Rule 40.05. that material injury is occurring, the Director, through the watermaster, shall:

a. regulate uses of water in accordance with the priorities of rights of the various surface or ground water users whose rights are included within the district, provided, that regulation of junior-priority ground water pumping where the injury is indirect or long range may, by order of the Director, be phased-in over not more than a five-year period to lessen the economic impact of immediate and complete curtailment; or

b. allow out-of-priority diversion of water by junior-priority ground water users pursuant to a mitigation plan which has been approved by the Director.

02. Regulation of uses of water by watermaster. The Director, through the watermaster, shall regulate use of water within the water district pursuant to the priorities of water rights under the following procedures:

a. The watermaster shall determine the quantity of surface water of the stream which is available for diversion and shall shut the headgates of junior-priority surface water users as necessary to assure that water is being used in accordance with the respective water rights from the surface water source.

b. The watermaster shall regulate the use of ground water in accordance with the rights thereto, approved mitigation plans and orders issued by the Director.

c. Where a call is made by a senior-priority surface - water user against a junior-priority ground water user in the water district the watermaster shall first determine whether a mitigation plan has been approved by the Director whereby diversion of ground water may be allowed to continue out of priority order. If the ground water user is a participant in such approved mitigation plan, and is operating in conformance therewith, the watermaster shall allow the ground water use to continue out of priority.

d. The watermaster shall maintain records of the diversions of water by the surface and ground water users within the water district and records of water provided under the approved mitigation plan which shall be compiled into the annual report which is required by Section 42-606, Idaho Code.

e. Under the direction of the Department, watermasters of separate water districts shall cooperate and reciprocate in assisting each other in assuring that diversion and use of water under water rights is administered in a manner to assure protection of senior-priority water rights provided the relative priorities of the water rights within the separate water districts have been adjudicated.

3. Reasonable exercise of rights. In determining whether diversion and use of water under rights will be regulated under Rules 40.01.a., or 40.01.b., the Director shall consider whether the petitioner's senior-priority water right making the call is suffering material injury and using water efficiently, without waste, and in a manner consistent with the goal of reasonable use of ground and surface waters as described in Rule 20.03. The director will also consider whether the respondent junior-priority water right is using water in this manner.

4. Determining injury and reasonableness of surface diversions. Factors the Director may consider in determining whether a senior-priority surface water right holder is suffering material injury and using water efficiently and without waste include, but are not limited to, the following:

a. The amount of water available under the senior-priority right.

- b. The effort or expense of the senior-priority water right to divert water.
- c. Whether the exercise of junior-priority ground water rights individually or collectively affects the quantity and timing of when water is available to, and the cost of -exercising, a senior-priority surface water right. This may include the seasonal as well as the multi-year and cumulative impacts of all ground water withdrawals from the area of common ground water supply.
- d. If for irrigation, the rate of diversion compared to the acreage of land served, the annual volume of water diverted, and the method of irrigation water application.
- e. The amount of water being diverted and used compared to the rights held by the senior-priority surface water right.
- f. The existence of water measuring and recording devices.
- g. The extent to which the requirements of the senior-priority surface water right could be met with the user's existing facilities and water supplies by employing reasonable diversion and conveyance efficiency and conservation practices; provided however, a storage water right holder shall be entitled to maintain a reasonable amount of carry-over storage water to assure water supplies for future dry years. In determining a reasonable amount of carry-over storage water, the director shall consider the average annual rate of fill and the average annual carry-over for prior comparable water conditions and the projected water supply for the system.
- h. The extent to which the requirements of the senior-priority surface water right could be met using alternate reasonable means of diversion or alternate points of diversion, including the construction of wells or the use of existing wells to utilize water from the common ground water supply under the petitioner's surface water right priority.
- i. The holder of a senior-priority surface water right will be prevented from requiring curtailment of pumping of any well used by a junior-priority ground water right where use of water under the junior-priority right is covered by an approved and effectively operating mitigation plan.

05. Determining reasonableness of ground water diversions. Factors the Director may consider in determining whether a senior or junior ground water right holder is using water with reasonable efficiency and without waste include, but are not limited to, the following:

- a. If for irrigation, the rate of diversion compared to the acreage of land served, the annual volume of water pumped, and the method of irrigation water application.
- b. The amount of water being pumped and used compared to the rights held by the pumper.
- c. The existence of measuring and recording devices.

06. Domestic and stock watering ground water rights exempt. A delivery call shall not be effective against any ground water right used for domestic purposes regardless of priority date where such domestic use is within the limits of the definition set forth in Section 42-111, Idaho Code, nor against any ground water right used for stock watering where such stock watering use is within the limits of the definition set forth in Section 42-1401A(12), Idaho Code.

07. Mitigation plan. A proposed mitigation plan shall be submitted to the Director in writing and shall contain the following information:

- a. The name and mailing address of the person or persons proposing the plan.
- b. Identification of the water rights of the person or persons proposing the plan.
- c. A description of the plan setting forth the water supplies proposed to be used for mitigation and any circumstances or limitations on the availability of such supplies.
- d. Such information as shall allow the Director to evaluate the factors set forth in Rule 40.09.

08. Notice and hearing. Upon receipt of a proposed mitigation plan the Director will provide notice, hold a hearing as determined necessary, and consider the plan under the procedural provisions of Section 42-222, Idaho Code, in the same manner as applications to transfer water rights.

09. Factors to be considered. Factors that may be considered by the Director in determining whether a proposed mitigation plan will prevent injury to senior rights include, but are not limited to, the following:

- a. Whether delivery of water pursuant to the mitigation plan is in compliance with state law.
- b. Whether the mitigation plan will provide replacement water, at the time and place required by the senior right, sufficient to offset the depletive effect of ground water withdrawal on the water available in the surface water source at such time and place as necessary to satisfy the rights of diversion from the surface water source. Consideration will be given to the history and seasonal availability of water for diversion so as not to require replacement water at times when the surface right has not historically received a full supply, such as during annual low-flow periods and extended drought periods.
- c. Whether the mitigation plan provides for replacement of water supplies or other appropriate compensation to the senior appropriator when needed during a time of shortage even if the effect of pumping is spread over many years and will continue for years after pumping is curtailed. A mitigation plan may allow for multi-season accounting for ground water withdrawals and provision of replacement water to take advantage of variability in seasonal water supply. The mitigation plan must include contingency provisions to assure protection of the senior-priority right in the event the mitigation water source becomes unavailable.
- d. Whether the mitigation plan proposes artificial recharge of a ground water source or area of common ground water supply as a means of protecting ground water pumping levels, compensating senior-priority water rights, or providing aquifer storage for exchange or other purposes related to the mitigation plan.
- e. Where a mitigation plan is based upon computer simulations and calculations, whether such plan uses generally accepted and appropriate engineering and hydrogeologic formulae for calculating the depletive effect of the ground water withdrawal.
- f. Whether the mitigation plan uses generally accepted and appropriate values for aquifer characteristics such as transmissivity, specific yield, and other relevant factors.
- g. Whether the mitigation plan reasonably calculates the consumptive use component of the ground water withdrawal.

h. The reliability of the source of replacement water over the term in which it is proposed to be used under the mitigation plan.

i. Whether the mitigation plan proposes enlargement of the rate of diversion, seasonal quantity or time of diversion under any water right being proposed for use in the mitigation plan.

j. Whether the mitigation plan is consistent with the conservation of water resources, the public interest or injures other water rights and would not result in the withdrawing of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge.

k. Whether the mitigation plan provides for monitoring and adjustment as necessary to protect senior rights from injury.

l. Whether the plan provides for mitigation of the effects of pumping of existing wells and the effects of pumping of any new wells which may be proposed to take water from the areas of common ground water supply.

m. Whether the mitigation plan provides for future participation on an equitable basis by ground water pumpers who divert water under junior priority rights who do not initially participate in such mitigation plan but who subsequently elect to do so.

n. A mitigation plan may propose division of the area of common ground water supply into zones or segments for the purpose of consideration of local impacts, timing of depletions, and replacement supplies.

o. Whether the petitioners and respondents have entered into an agreement on an acceptable mitigation plan even though such plan may not otherwise be fully in compliance with these provisions.

10. Actions of the watermaster under a mitigation plan. Where a mitigation plan has been approved as provided in Rule 40.09, the watermaster may permit the use of ground water to continue out of priority order within the water district provided the junior-priority ground water user operates in accordance with such approved mitigation plan.

11. Curtailment of use where diversions not in accord with mitigation plans or mitigation plan is not effective. Where a mitigation plan has been approved and the junior-priority ground water user fails to operate in accordance with such

approved plan, or the plan fails to mitigate the injury, the watermaster will notify the Director who will immediately issue cease and desist orders and direct the watermaster to terminate the out-of-priority use of ground water rights otherwise benefitting from such plan or take such other actions as provided in the mitigation plan to ensure protection of senior-priority water rights.

12. Collection of assessments within water district. Where a mitigation plan has been approved, the watermaster of the water district shall be empowered to include the costs of administration of the plan within the annual operation budget of the district, to provide for the collection of assessment of ground water users as provided by the plan, to collect the assessments and expend funds for the operation of the plan, and to maintain records of the volumes of water made available by the plan and the disposition of such water.

041--049 (RESERVED)

050. AREAS DETERMINED TO HAVE A COMMON GROUND WATER SUPPLY WHICH AFFECTS THE FLOW OF WATER IN A SURFACE WATER SOURCE (Rule 50).

01. Eastern Snake Plain Aquifer. The area of coverage of this rule is the Eastern Snake Plain Aquifer and interconnected stream systems within Idaho as the aquifer is defined in the report, Hydrology and Digital Simulation of the Regional Aquifer System, Eastern Snake River Plain, Idaho, USGS Professional Paper 1408-F, 1992.

a. The Eastern Snake Plain Aquifer supplies water to and receives water from the Snake River.

b. The Eastern Snake Plain Aquifer is found to be an area of common ground water supply which affects the flow of water in the Snake River upstream of the USGS gaging station at King Hill, Idaho.

c. The reasonably anticipated average rate of future natural recharge of the Eastern Snake Plain Aquifer is found to be 8.06 million acre feet (MAF) per year (1980 conditions):

Surface-water irrigation	4.84 MAF
Tributary basins	1.44 MAF
Precipitation	.70 MAF
SNAKE RIVER LOSSES	.69 MAF
Tributary-stream and canal losses	.39 MAF
Total	<hr/> 8.06 MAF

d. The Eastern Snake Plain Aquifer area of common ground water supply will be created as a separate water district or incorporated into an existing or expanded water district as provided in Section 42-604, Idaho Code, when the rights to the diversion and use of water from the aquifer have been adjudicated.





## APPENDIX 2



September 28, 1993

Mr. Keith Higginson, Director  
Idaho Department of Water Resources  
1301 North Orchard Street  
STATEHOUSE MAIL  
Boise, ID 83720-9000

Re: Steering/Advisory Committee for Conjunctive Water  
Management Rule-Making

Dear Keith:

Idaho Department of Fish and Game (IDFG) requests that you select a representative from IDFG to work on the above-referenced committee. On the surface it seems the issues are tied to consumptive, out-of-stream uses of water such as irrigation or aquaculture. However, we believe any water management decisions based on the proposed rule-making have the potential to impact the fish and wildlife that depend on these water resources. Cal Groen or his designee will be our contact in this matter. You can reach Cal at 334-2595.

Thank you for your consideration of our request.

Sincerely,  
**COPY** Original Signed  
by Jerry M. Conley  
Director  
Jerry M. Conley  
Director

HJH & CG  
CR  
JMC/CR/sr

cc: Region 4  
Region 5  
Region 6  
NRPB

October 29, 1993

Mr. Keith Higginson, Director  
Idaho Department of Water Resources  
1301 North Orchard Street  
STATEHOUSE MAIL  
Boise, ID 83720

Re: Proposed Rule-Making for Conjunctive Water Management Dear

Mr. Higginson:

Idaho Department of Fish and Game (IDFG) offers the following general comments and on the specific issues to be addressed in the proposed rule-making on conjunctive water management of the Snake River Plain Aquifer and the Snake River.

Construction of artificial recharge projects has been touted as the solution to declining spring discharges in the Thousand Springs area. We believe that pursuing artificial recharge without limiting groundwater withdrawal will not solve the problem. Also, the rule-making does not address the impacts to fish, wildlife and riparian resources associated with the Snake River. The river already suffers from the effects of reduced flows. If groundwater depletion is not reduced, recharge will likely result in further degradation of instream resources.

We all realize that we are managing a finite resource; the actual quantity of water may vary from year to year, but it is still finite. At some point in the near future, we must stop issuing permits for additional water development.

If a steering or oversight committee is designated to address the issues of conjunctive management, IDFG requests representation on that committee.

The following are our comments on the specific issues to be addressed for the proposed rule-making:

1. We believe the boundaries for the conjunctive management area should be the entire Snake River Basin. Fragmented management of the water resources within the basin will lead to continued conflict and inefficient use of these resources.

2. We do not advocate rushing into new rules and regulations solely for the sake of meeting an arbitrary deadline. The proposed rules should be based on sound, thorough fact-finding and data analysis. If information is insufficient or lacking, we propose postponing the final rule-making decisions until the information is available. Likely, the rules promulgated as a result of this effort will be "on the books" for quite some time.

It also seems it is critically important to know the status of existing uses in the Snake River Basin, both surface and groundwater. It seems presumptuous to enter into a new set of rules until the Snake River Basin Adjudication can sort out the legality of the existing uses.

3. A committee of knowledgeable individuals, who can speak for their respective interests, should be helpful in the process. It seems important that these individuals understand Idaho water law, hydrology of the Snake River Basin and Snake Plain Aquifer, the negotiated rule-making process, and the principles of conjunctive management.
4. It seems that we need a definition of "immediate" benefit. What time period constitutes "immediate" benefit? A day? A week? How is the "futile call" principle now applied in Idaho?
5. We believe regulation by priority should be incorporated with the idea that each water right holder (both surface and groundwater) should be required to use reasonable means of diversion.
6. Proposing artificial recharge projects to mitigate for impacts of increased groundwater pumping is avoiding the issues of over-appropriation of our finite surface water resources and "mining" of our groundwater resources. It seems recharge would take water away from existing instream uses (e.g. fish and wildlife resources, hydropower, recreation, aesthetics) to avoid dealing with issue of limiting groundwater withdrawal to "reasonable pumping levels." We believe the water of the State of Idaho is a finite resource that must serve many users, both consumptive and nonconsumptive.
7. We believe it is appropriate for the Department of Water Resources to administer the rights.

8. Administration should be tight. Relaxed administration would seem to leave us right where we are currently. We believe wells should be metered and checked on a regular basis. We also believe measuring devices should be incorporated into existing surface water diversions and they also should be checked regularly to insure legal diversion amounts are not exceeded.
9. We believe all water right holders should be required to use "reasonable" means of diversion and use their water in the most efficient manner possible, regardless of the priority date of the water right.
10. As stated above, we believe water conservation is appropriate and necessary in order to fairly allocate our finite water resources for all uses. We do not believe people should be penalized for conserving water. We believe an accounting needs to be made of the water that was made available because of implementation of conservation measures (e.g. conversion from flood to sprinkler irrigation). Where has that water gone? Was it left in the rivers and streams to provide downriver flows? Was the same amount diverted as before and simply spread over more acres?
11. Drought is a natural phenomenon that cannot be regulated nor easily predicted. It seems that existing water law can deal with reduced water levels resulting from drought if other man-induced reductions in flows are properly managed. We must recognize that water is a finite resource that cannot be infinitely allocated.
12. We are unsure if the proposed rule-making should address the legal issues of estoppel, forfeiture, adverse possession, etc. We do not believe that pre- or early-1900 water rights on springs should be entitled to the benefits of the build-up in spring discharge unless they have applied for the use of that additional water. Additionally, the build-up in spring flows resulting from past irrigation practices (i.e. flood irrigation) should be considered the same as irrigation wastewater. It can be used when it is available, but when waste is reduced (i.e. change to sprinkler irrigation, lining canals, etc.), it is gone.
13. We believe the moratorium should be continued until the Snake River Basin Adjudication is completed and the nature and extent of existing uses can be assessed and it is determined whether or not the aquifer is already over-appropriated.
14. We are not sure whether legislation or rule-making is the appropriate avenue for addressing a well spacing program.

Mr. Keith Higginson, Director  
October 29, 1993  
Page 4

15. We do not believe domestic, commercial, municipal, and industrial (DCMI) uses should be managed differently than any other use of water. Additionally, we believe the rule-making procedure should recognize that there are other beneficial uses of water besides DCMI and agriculture.

We recognize the complexity and difficulty of the proposed rule-making proceedings on conjunctive water management. This process will no doubt have significant and far-reaching effects on all water right holders in the Snake River Basin and throughout Idaho. We thank you for the opportunity to provide our comments.

Sincerely,

Cal Groen, Chief  
Natural Resources Policy Bureau

CG:CR:tlv

cc: S. Grunder, Region 3  
D. Parrish, Region 4  
J. Lukens, Region 5  
B. Martin, Region 6



February 4, 1994

Mr. Keith Higginson, Director  
Idaho Department of Water Resources  
1301 North Orchard Street  
Boise, ID 83704

RE: Proposed Rules for Conjunctive Water Management

Dear Keith:

Idaho Department of Fish and Game (IDFG) has reviewed the above-referenced document and has the following general and specific comments.

General Comments:

The draft rules do not address our concerns that fish and wildlife values will be protected. Healthy river and stream systems provide valuable economic benefits to the state and any actions that may affect their health should be addressed in the rules for conjunctive management of water resources. On September 28, 1993, IDFG sent a letter to you requesting that a representative from the IDFG be selected to work on the Steering/Advisory Committee to propose rules for the conjunctive management of the state's surface and groundwater resources. We indicated that we believe that any water management decisions could impact the fish and wildlife that depend on those resources.

Arguably, the Director of the Department of Water Resources is required to consider public interest, which is related to the larger doctrine of the public trust, in proposing rules to manage surface and groundwater conjunctively. The state holds all waters in trust for the benefit of the public and "does not have the power to abdicate its role as trustee in favor of private parties." 105 Idaho 622, 625 (1983). In the case of Shokal v. Dunn, the Supreme Court indicated that I.C. Section 42-203A places upon the Director of Water Resources the affirmative duty to assess and protect the public interest. 109 Idaho 330, 337 (1985).

Mr. Keith Higginson, Director  
February 4, 1994  
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It appears the draft rules do not deal with the big issue of over-allocation of our finite water resources. Rather it seems that the rules are geared to maintain the status quo. The rules will allow continued pumping by junior groundwater users as long as they can "mitigate" for impacts to senior surface water users. What about impacts on nonconsumptive uses such as fish, wildlife, aquatic habitat, recreation, and aesthetics? The rules do not address this concern. We must recognize that historic uses of water cannot be considered inviolate. The way we conducted business 50 to 100 years ago is no longer appropriate as we approach the 21st century. We have an obligation and a mandate to manage our resources on a more equitable basis. We must accommodate multiple uses of our water resources which must include healthy stream systems.

Specific Comments:

10. DEFINITIONS (Rule 10).

11. Reasonably Anticipated Average Rate of Future Natural Recharge. We suggest the following additional sentence. "The estimate (of natural recharge) will be made prior to approval of any new or pending applications for permit or applications for transfer of existing water rights."

14. Mitigation Plan. We believe any mitigation plan must be subject to the public review process and must adequately address impacts to nonconsumptive uses as well as impacts to consumptive surface water rights.

17. Full Economic Development of Underground Water Resources. We believe a more appropriate concept would be the "sustainable" development of our water resources. These resources belong to the people of the state and should be managed with all recognized beneficial uses in mind. We can no longer afford to manage them for the benefit of a single purpose or for short-term economic gain.

30. RESPONSES TO CALLS FOR WATER DELIVERY... (Rule 30). We believe this rule places an undue burden on the petitioner to prove injury.

31. DETERMINING AREAS HAVING A COMMON GROUNDWATER SUPPLY WHICH AFFECTS THE FLOW OF WATER IN A STREAM OR STREAMS (Rule 31).

02. In considering all available data, the Director should also consider the needs of nonconsumptive uses as well. We need to address the ecological needs and impacts of water management in addition to the physical interaction between surface and groundwater.

040. RESPONSES TO CALL FOR WATER DELIVERY ... (Rule 40).

01. b. Any mitigation plan developed should be subject to public review in addition to Director approval, and must consider the potential impacts to nonconsumptive uses and the public interest.

03. a. This section does not address the possibility that junior surface water users may still be senior to groundwater users. It appears to place the burden of responsibility for providing senior surface water rights on the junior surface water users and allows junior groundwater users to continue to pump. This seems contrary to the concept of conjunctive management.

b. We reiterate that mitigation plans should also be subject to public review and not just Director approval. Out of priority diversion should not be allowed if it will have significant impacts on nonconsumptive uses.

05. Determining injury and reasonableness of surface diversions should include a determination of impacts to fish, wildlife, aquatic and riparian habitat, and other nonconsumptive uses.

c. Measuring and recording devices should be required for diversions of all surface or groundwater.

d. We concur that water conservation and efficiency measures are important and we would like to see the water "saved" used to provide maintenance flows for fish and wildlife habitat.

e. This section seems to advocate that surface water users should convert their diversions to groundwater sources. If over-pumping of the groundwater is the root of the problem, how can more groundwater pumping correct it?

06. c. As with surface water users, measuring and recording devices should be a requirement before diversion should be allowed.

08. To the extent possible, mitigation plans should include the entire hydrologic system of interconnected surface and groundwater and the impacts of the proposed mitigation on the health of streams within the system. Again, we believe the mitigation plans must be subject to public review, as is any new or amended application for permit, or transfer or amendment of existing water rights, and must consider public interest and public trust concerns.

b. The mitigation plan should identify where replacement water is coming from and the impacts to nonconsumptive uses and how those impacts will be ameliorated.

Mr. Keith Higginson, Director  
February 4, 1994  
Page 4

i. The mitigation plan must consider the broader landscape than just junior groundwater users delivering water to senior surface water users. Impacts to the ecosystem of managing solely for consumptive uses must be addressed. Existing and future ecological flow needs must be considered in the plans.

050. AREAS DETERMINED TO HAVE A COMMON GROUNDWATER SUPPLY...  
(Rule 50).


The information presented is based on 1980 conditions. Do we not have more recent information? Have we accounted for the impacts of new development resulting from the implementation of the Swan Falls Agreement and the drought?

Part b. of this section defines the Eastern Snake Plain Aquifer as the area which affects flows in the Snake River upstream of the USGS gaging station at King Hill, Idaho. It appears the intent of this section is to include the Eastern Snake Plain Aquifer in District 01. Why then is Water District 01 enlarged to include the Snake River and its tributaries downstream to the USGS gaging station near Murphy, Idaho? This is inconsistent with the definition of the Eastern Snake Plain Aquifer.

As a final comment on the draft rules, the concept of aquifer recharge seems to have been overlooked. It appeared the idea was a major component of the initial scoping process, but seems to have fallen by the wayside in drafting the rules. We believe that pursuing artificial aquifer recharge without limiting groundwater withdrawal would not solve the problem. Diverting surface water during the non-irrigation season for the purpose of recharging a declining aquifer would have adverse impacts on existing nonconsumptive resources such as fish, wildlife, and their habitat.

We wish to thank you for the opportunity to comment on the draft rules.

Sincerely,

  
Jerry M. Conley  
Director

CR - EG Acting Chief  
JMC:CR:tlv

cc: Environmental Staff Biologists  
Steve Goddard  
Marti Bridges, IRU

April 11, 1994

Mr. R. Keith Higginson, Director Idaho  
Department of Water Resources 1301  
North Orchard Street  
Boise, Idaho 83706-2237

RE: Comments on the proposed rules for the conjunctive management of ground and surface water

Dear Keith:

Idaho Department of Fish and Game (IDFG) has reviewed the Notice of Proposed Rule Making, Docket No. 37-0311-9301, Rules for Governing Conjunctive Management of Surface and Ground Water and has the following general and specific comments.

### **General Comments**

The IDFG agrees with the concept of conjunctively managing the ground and surface waters of the State of Idaho and appreciates the arduous task the Idaho Department of Water Resources (IDWR) has undertaken. However, it appears the proposed rules are geared to maintain the status quo of water management in the State. The rules will allow continued ground water pumping as long as impacts on senior surface water rights can be "mitigated" . The rules do not address impacts to public interest values such as fish, wildlife, aquatic habitat, recreation, aesthetics, or water quality that may occur as the result of this mitigation. IDFG believes that healthy river and stream systems provide valuable economic benefits to the State and that IDWR should consider the impacts that implementation of conjunctive management rules will have on the health of these systems.

At this time, it is unclear how the proposed rules can be applied to existing water rights in the Snake River basin until the ongoing Snake River Basin Adjudication (SRBA) proceedings are complete and the nature and extent of those water rights is determined. It is also unclear how the recent Idaho Supreme Court decision in the Musser case will affect implementation of the proposed conjunctive management rules. IDFG is concerned that we are proceeding

with the rule making process to quickly solve the state's water crisis rather than establishing rules based on long-term rationale considering all water demands.

### **Specific Comments**

#### 10. DEFINITIONS.

11. Reasonably Anticipated Average Rate of Future Natural Recharge. No definition of incidental recharge is included. We also believe that incidental recharge resulting from diversion and use of water for irrigation and other purposes should not be included in a definition of "natural recharge".

14. Mitigation Plan. There is no provision in this definition for mitigating harm to public interest values.

16. Material Injury. The necessity of showing material injury seems to be in conflict with the Musser decision, which appears to hold if the senior water right holder is not receiving his full water right and makes a call, the Director of IDWR must act to deliver the water. Additionally, the term is not used consistently. The rules also refer to "injury" and "substantial interference" when they address impacts of junior ground water users on senior surface water users.

a. Finding material injury to holders of valid claims or reducing the amount of water available below the "amount beneficially used" is inconsistent with the definition of a valid water right. Constitutional claims are not considered valid water rights for the purposes of making a call for water delivery under these rules.

b. & c. The terms "unreasonable effort or expense" and "reasonable ground water pumping level" need to be defined or clarification.

17. Full Economic Development of Underground Water Resources. IDFG believes our water resources should be managed for sustainable levels of development and with all recognized beneficial uses in mind. We cannot afford to manage our water for the benefit of a single purpose.

18. Artificial Ground Water Recharge. Incidental recharge should be part of this definition of artificial ground water recharge rather than included in the definition of natural recharge.

19. Reasonable Ground Water Pumping Level. Have reasonable pumping levels been determined and, if so, how?

**20. GENERAL STATEMENTS OF PURPOSE . . .**

03. IDFG believes that the goal of "optimum development of water resources in the public interest" includes consideration of public interests values such as fish, wildlife, aquatic habitat, recreation, aesthetics, and water quality and therefore, "full economic development of underground water resources" must also consider these factors.

**030. RESPONSES TO CALLS FOR DELIVERY . . . NOT IN A WATER DISTRICT . . .**

02. Informal resolution. It is conceivable that informal negotiations among competing water users could result in actions that might impact the public interest. The rules should provide a mechanism for public involvement in these informal negotiations.

04. This section should state which Department Rules of Procedure apply to petition consideration.

05. See 04. above.

06f. This section indicates IDWR can initiate an adjudication if needed to determine water rights. Does this mean IDWR will ask the SRBA court to adjudicate the rights or that IDWR will do it?

**031. DETERMINING AREAS OF COMMON GROUND WATER SUPPLY . . .**

02. In considering all available data, the Director should also consider the ecological needs of surface waters and the resources dependent upon those surface waters in describing the relationship between ground and surface water.

04. What factors will the Director use to determine the reasonably anticipated average rate of future natural recharge? These factors should be indicated in the rules.

**040. RESPONSES TO CALLS FOR WATER DELIVERY ... IN AN ORGANIZED WATER DISTRICT.**

01b. IDFG believes mitigation plans must consider impacts to nonconsumptive uses and out-of-priority diversions should not be allowed to occur if they negatively impacts those uses. Additionally, approval of a mitigation plan should only occur after a public hearing.

04e. The terms "reasonable diversion" and "reasonable amounts of carry-over storage" need to be defined.

04f. This section appears to force a surface water user to convert to pump ground water to exercise his senior priority right. The senior user could be forced to spend a lot of money to "chase water down". If over-pumping of the ground water is the problem, how can more ground water pumping alleviate it? It also appears that this rule is in conflict with the Musser decision.

04g. This section refers to a junior pumpers **direct and substantial interference** with the water supply of a prior surface water right rather than material injury to a senior water right. This inconsistency should be addressed. Again, it appears that this section is in conflict with the Musser decision.

08. The phrase "as determined necessary" should be deleted following "hold a hearing". **Public hearings** to discuss the full range of implications of proposed mitigation plans on public interest concerns should be a requirement of the process.

09j. IDFG believes mitigation plans should identify the direct and indirect impacts to all beneficial uses, both consumptive and nonconsumptive, and how the mitigation plan will ameliorate those impacts.

09o. If petitioners and respondents may agree to a mitigation plan that is not fully in compliance with other provisions of this section, what assurance is there that the plan will consider conservation of water resources, the public interest or injury to another water right?

11. This section deals adequately with failure of junior water users to abide by an approved mitigation plan, but fails to address plans that are faithfully followed but do not work.



Mr. R. Keith Higginson  
April 11, 1994  
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IDFG appreciates the opportunity to comment on these proposed rules and looks forward to working with IDWR on conjunctive water management.

Sincerely,

Cal Groen, Chief  
Natural Resources Policy Bureau

CG:CR:alb

cc: Regional environmental staff biologists  
Steve Goddard, Legal  
Marti Bridges, Idaho Rivers United

## JOB PERFORMANCE REPORT

State of: Idaho Name: FISHERY PROGRAM COORDINATION  
Project No: F-82-T-4 Title: Panhandle Region Technical Guidance  
Subproject No: \_III Job No: 1  
  
Period covered: January 1, 1993 to December 31, 1993

### **ABSTRACT**

During the period January 1, 1993 to December 31, 1993, comments were provided on over 450 issues, developments, or proposals which would potentially affect fish and wildlife habitat in the Panhandle Region. In addition, over 150 meetings or site visits were attended or made. Forest management, stream and lakeshore alterations, and land development issues required the greatest amount of time and effort. Designation of two new stream segments of concern, Trestle Creek and the Moyie River, and revisions of site-specific best management practices (BMPs) for the Lakeview segments required a considerable amount of time, and produced significant results. Other stream segments of concern were revisited with little or no change to existing site-specific BMPs, and considerable time was spent working on the Hayden Lake Clean Lake Committee.

Individual issues or projects also requiring considerable attention include resolution of our appeals of two Forest Service timber sales, monitoring habitat and/or fish populations on several stream systems, and placement of a fish passage device in the Strong Creek flume.

Author:

Charles E. Corsi  
Environmental Staff Biologist

## **OBJECTIVES**

1. Influence land use decisions in the Panhandle Region to protect br improve fish and wildlife habitat.
2. Provide other agencies, organizations or individuals with technical guidance, assistance, advice or comments on projects, activities or developments which might affect or are associated with fish and wildlife habitat in the region.
3. Comment on National Environmental Policy Act documents, Federal Energy Regulatory Commission documents, stream channel and lakeshore alteration proposals, gas and electrical transmission lines, land use planning, and other environmental impacts.
4. Ensure the Idaho Department of Fish and Game's (IDFG) role in the antidegradation program is met.
5. Coordinate fishery concerns with wildlife concerns from regional wildlife staff to address habitat issues.

## **RECOMMENDATIONS**

1. Continue efforts to educate landowners and land managers about habitat protection and maintenance.
2. Continue building and establishing working relationships with land managers to implement required or voluntary procedures which protect or benefit fish and wildlife.
3. Continue active efforts in Coeur d'Alene basin remediation programs, particularly as they apply to floodplain and watershed projects.
4. Continue monitoring of Trapper Creek fish populations. Expand surveys to include other stream segments of concern, as well as "control" sites.
5. Attempt to keep up with and get ahead of the growing number of issues and concerns affecting fish and wildlife habitat in the Panhandle Region. Improve coordination with other IDFG personnel and volunteers to meet workload demands. Explore funding opportunities to hire a full-time or seasonal assistant to improve monitoring and baseline data collection abilities, and conduct field reconnaissance of project sites to improve the quality of responses.
6. Continue to work closely with other agencies, the public, and industry representatives to prevent or reduce impacts to fish and wildlife.

## TECHNIQUES USED

Personal\_ contact, project and document review, and field inspections were used to provide technical guidance comments or advice on projects, activities, or proposals which could affect fish and wildlife resources in the Panhandle Region. Data on fish populations were gathered for several streams using electrofishing and direct observation.

## FINDINGS

During the period of January 1, 1993 to December 31, 1993, I provided written comments on over 450 habitat related issues. In addition, I attended over 150 meetings or site visits to review problems or examine proposals and projects. U.S. Forest Service activities, lake, stream, and wetland alterations, and planning and zoning issues required considerable attention (Table 1). Effort put forth on Idaho Department of Lands (IDL) timber sales and related activities increased substantially as well. Specific projects worth noting in detail include the following:

### Timber Sale Appeals

During the previous reporting period (Reid, et al, 1993), the (IDFG) appealed two timber sales on the Fernan District of the Idaho Panhandle National Forest. The sales were appealed because of concerns over impacts to the already declining fishery in the Little North Fork Coeur d'Alene basin.

Negotiations on the appeals continued into the present reporting period, at which time the Fernan District withdrew both sales. Shortly thereafter, new Decision Notices were issued which would have resulted in significantly reduced timber harvest and elimination of the most sensitive cutting units. Because the new decisions still incorporated extensive watershed rehabilitation packages, we agreed with the Forest Service to withdraw our opposition to the sale. Subsequent appeals, however, were filed by environmental groups, with the resulting withdrawal of the new decisions. Presently, the Fernan District is examining the potential for implementing only the watershed rehabilitation portion of the proposed projects, using funds other than timber receipts. The IDFG should enthusiastically support watershed rehabilitation projects not dependent on timber harvest dollars.

### PGT-PGE Natural Gas Pipeline Project

Reconnaissance level monitoring was conducted on the Moyie River during 1993 to assess mitigation project performance. Additionally, I assisted with harlequin duck monitoring and PGT snorkeled to assess fish populations (PGT, personal communication).

Fish habitat structures placed in the Moyie River as mitigation for the eight pipeline crossings made in 1992 appear to be creating and providing habitat diversity for salmonids. PGT reported substantial use of structures by rainbow, brook, and cutthroat trout, although studies were primarily qualitative. Impacts to the 1992 year class of trout were not assessed.

Observations indicate most fine sediment which settled in the river during the 1992 construction had been flushed through by spring runoff. Isolated pockets of fine sediment deposition can still be found.

Modifications were made to the Meadow Creek culvert outlet to facilitate fish passage. Modifications were largely based on IDFG input, and the structure appears to be capable of passing fish at this time. The Meadow Creek fencing and riparian rehabilitation project was also initiated in 1993.

Adult harlequin ducks were observed during spring surveys. At least one pair was utilizing the canyon section near Deer Creek just prior to the nesting period. No broods were observed during subsequent summer surveys, however (Cassirer, personal communication). Remaining dollars from the 1993 surveys will be used to resurvey streams in 1994.

A final mitigation issue which remains unresolved deals with habitat mitigation for disturbances to nesting raptors. PGT is actively attempting to purchase a suitable tract of land to mitigate these losses, but to date no purchase has been completed.

#### Trapper Creek Monitoring

Two days were spent monitoring fish populations in Trapper Creek. Because of equipment problems, population estimates were completed at only two of the three established sites. I conducted bull trout redd surveys on the lower four kilometers of Trapper Creek, upstream to a likely migration barrier.

During the first electrofishing pass through the lower Trapper Creek site, the shocker broke down. We were able to repair the machine and started the first pass over. Fish collected from the aborted pass were incorporated into the first pass, possibly resulting in a slight violation of the equal effort assumption of the estimator. I believe it is likely that, if anything, pooling these data resulted in a slightly lower estimate than would have been calculated had there been no equipment problem. No problems occurred during the estimate made for the East Fork.

Young-of-the-year bull trout (30 mm - 79 mm total length) comprised the bulk of the fish in the bull trout population (Table 2). With the exception of three fish, the remainder of the bull trout were classified as yearlings (80 mm - 129 mm total length). Age groupings are based on length frequency data only (Table 3). A pair of spawning adults, both over 500 mm total length were captured, along with one sub-adult fish.

Cutthroat trout densities at the lower Trapper site declined for the third consecutive year, to 1.3 fish/100 m<sup>2</sup>. Most fish captured were from the 1992 year class. Unlike in 1992, no young-of-the-year cutthroat trout were sampled during 1993 (Table 4). Also, cutthroat trout in the age 2+ and older age groups were more numerous in 1992 than in 1993 (Table 4).

In the East Fork site, the estimated density of cutthroat trout declined from 14.6/100 m<sup>2</sup> to 13.2/100 m<sup>2</sup>. In 1992 we captured 29 fish, all aged 1+ or older. The 1993 sampling produced a total of 26 fish, of which nine were young-of-the-year (<70 mm total length).

The increased number of young-of-the-year fish for both species suggest hatching conditions may have been more favorable in 1993. It is also possible different equipment used in 1993 was more efficient at capturing young-of-the-year, but this seems unlikely given that sampling efficiency appeared similar for both years.

It is also worth noting that no sculpins were documented at either site, despite efforts to capture all fish.

Bull trout redd surveys were conducted on September 27. Only four redds were observed. Because previous redd survey data from Trapper Creek are limited, it is not clear whether what appears to be a low count is abnormal for Trapper Creek. Given the number of juvenile fish found in previous electrofishing sampling, Trapper Creek is an important contributor to the Upper Priest Lake bull trout population, and I anticipated finding more redds. Redd surveys will be added to the monitoring program in future years in an effort to better understand population dynamics in the system, and how or if they are being affected by timber harvest.

#### South Fork Coeur d'Alene River

In response to a request from the Idaho Division of Environmental Quality (IDEQ), I conducted electrofishing surveys on four sections of the South Fork Coeur d'Alene River during 1993. Where densities of fish were high enough, two passes were made and population estimates were calculated using the mark-recapture technique. Data are also reported as catch per unit effort to allow some comparison for segments where estimates could not be calculated. Data are summarized in Table 5.

Considering that nearly a century of floodplain destruction, stream channel alteration, and toxic mine waste dumping have impacted the South Fork downstream from Wallace, resident populations of cutthroat trout have recovered reasonably well at the Elizabeth Park and Silverton sites. Brook trout, and some wild rainbow trout are also present. Stocked hatchery rainbow trout were present at the Silverton (most upstream) site. Based on these observations, the total lack of salmonids evident in the Smelterville Flats site and the low number of fish downstream from Pine Creek, it appears water quality, in terms of toxic metals loading, becomes unsuitable for salmonids through the

Smelterville Flats area. Although no structured physical habitat surveys were conducted, casual observation suggests physical habitat conditions in the Smelterville Flats and Pine Creek reaches are at least as good (and probably superior to) habitat conditions at the upstream sites. Pine Creek, which is known to support salmonids (Reid, et al.) probably dilutes pollutant levels in the South Fork downstream to the mouth. This would appear to be the only plausible explanation for the presence of salmonids, including young-of-the-year mountain whitefish, downstream from Pine Creek.

Earlier studies of the South Fork Coeur d'Alene River (cited in Eisenbarth and Wrigley 1978, Ellis 1932) depict the entire reach of the river from Wallace to the mouth as being essentially a biological desert. With the collapse of the mining/smelting industry in the valley, water quality has improved enough to sustain fish life in some reaches. Where high concentrations of toxic metals accumulate at downstream reaches, coldwater biota are still severely depressed. There are indications of large, migratory cutthroat trout moving through these reaches to spawn in tributaries with suitable habitat.

Considerable effort is being spent in developing and implementing remediation projects along the South Fork and its major tributaries. IDFG has taken an active role in this process to ensure physical habitat characteristics are addressed when projects are designed primarily to isolate heavy metals.

#### Strong Creek Fish Ladders

A Challenge Grant project with the Panhandle Chapter of Trout Unlimited (TU) was initiated to restore fish passage through the Strong Creek flume. Challenge Grant monies were combined with TU dollars to purchase materials and fund fabrication of an angle iron fish ladder. The ladder was installed on September 11, 1993.

During installation, it was noted that the lower portion of the flume had recently rotted out, requiring on-site fabrication of an additional step up. The success of this project will be monitored during spring 1994.

It is hoped the fish passage device will allow migratory cutthroat trout to return to Strong Creek. A potential side benefit would be possible re-establishment of bull trout spawning in Strong Creek as well.

An additional barrier exists at the City of East Hope water diversion, approximately 1 km upstream. Presently, IDFG and TU are pursuing a project to provide passage upstream from this diversion. Passage around this structure would result in approximately 5 km of high quality habitat being made available to Lake Pend Oreille migrants.

### Grouse Creek Stream Flows

Stream flows in Grouse Creek were measured monthly from October 1993 through March 1994. Due to ice and snow conditions during the December through February period, flow measurements were made approximately one mile upstream from the gage site (the standard site). Only one small, intermittent tributary enters Grouse Creek between the two sites, and was not expected to significantly influence flows. The alternate measuring site was less than desirable for taking measurements because of its location on an outside bend of the creek, but it was the only open water available.

Calculated stream flows were lowest in October and November, then increased with accumulated snowpack (Table 6). Peak flow occurred in March with the advent of spring runoff. Mild winter conditions probably contributed to the increased flows during the winter months.

### Local Working Committees

During the reporting period I participated in 24 Local Working Committee (LWC) meetings for eight different LWCs, which cover 13 Stream Segments of Concern (SSOC). Two of the SSOC, Trestle Creek and the Moyie River, were newly designated in 1993. I was unable to attend the Buck Creek LWC meeting due to scheduling conflicts.

By far the most effort was required for the Trestle Creek LWC, which resulted in significant new site-specific BMPs (SSBMPs) (Table 7). The Trestle Creek LWC was comprised of a number of residents with strong concerns about the status of bull trout in the watershed. Trestle Creek is the most important bull trout spawning tributary to Lake Pend Oreille, and probably supports the highest densities of spawning bull trout in Idaho (Horner, personal communication). Because the LWC was informed the Forest Service would be conducting a comprehensive watershed survey in Trestle Creek in 1994, SSBMPs were adopted on an interim basis, with the objective of "fine tuning" them following completion of the Forest Service study.

Significant new SSBMPs were also adopted for the Lakeview streams, which are also important for bull trout spawning (Table 7). A major objective for both the Trestle Creek and Lakeview SSOC was to ensure long-term recruitment of large organic debris for habitat and channel stability purposes. Thus, site-specific riparian management plans are required for both areas.

The most significant result from the Moyie River LWC was an increase (to a 25-foot minimum) in the Class II stream protection zone (SPZ) with a requirement for retention of unmerchantable timber. The Idaho Forest Practices Committee, however, has since adopted a 30-foot minimum SPZ for Class II streams, thus the only significant change is the requirement for retention of unmerchantable timber.



No significant changes were made in SSBMPs for the remainder of streams, and meetings were primarily used to discuss monitoring efforts.

## ACKNOWLEDGEMENTS

Wildlife Habitat Biologists Bryan Helmich, Pat Cole, and John Nigh provided a considerable amount of input, including field observations on fish and wildlife habitat conditions, which figured prominently in providing technical assistance in the Panhandle- Region. Regional, research, and enforcement staff also provided considerable input during the course of the year. Special thanks also to the Panhandle Region secretarial staff for typing and other assistance.

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Ellis, M. 1932. Pollution of the Coeur d'Alene River and adjacent waters by mine wastes. United States Bureau of Fisheries.

Reid, W., J. Heimer, C. Robertson, C. Corsi, S. Grunder, D. Parrish, and B. Martin. 1993. Statewide Technical Assistance. Job Performance Report Project F-82-T-3. Idaho Department of Fish and Game.

Table 1. Summary of technical assistance contacts by Panhandle Region Environmental Staff Biologist during the period January 1, 1993 through December 31, 1993.

Agency/Group	<u>TYPE OF CONTACT</u>		
	Written	Meetings/ Site visits	Total
US Forest Service	79	33	112
ID Department of Lands			
Timber	23	12	35
Stream Segments of Concern (SSOC)	0	24	24
Navigable Waters	91	9	100
Mining	4	2	6
ID Department of Water Resources	78	10	88
US Army Corps of Engineers	20	12	32
City/County Planning and Zoning	66	4	70
Bureau of Land Management	7	1	8
Division of Environmental Quality	7	1	8
Cd'A Basin Interagency Group	9	8	17
ID Dept. of Parks and Recreation	1	0	1
Outfitters and Guides	8	3	11
ID Transportation Department	3	0	3
US Navy	1	1	2
USAF	1	1	2
FHWA	3	1	4
US Fish and Wildlife Service	1	4	5
US Bureau of Mines	1	0	1
CLCC	1	9	10
Utilities	1	0	1
FERC/Pipeline/Hydro	7	7	14

Table 1. Continued.

Agency/Group	<u>TYPE OF CONTACT</u>		Total
	Written	Meetings/ Site visits	
PHD	2	0	2
PAC	9	0	9
School/Conservation/Sportsmen	11	16	27
Individuals	9	0	9
Industry	8	0	8
In-house	20	13	33
TOTALS	469	171	640

Table 2. Comparison of estimated densities (fish/100 m<sup>2</sup>) of cutthroat trout and bull trout from Trapper Creek, 1982 to 1993.

Species	Location	Year					
		1982	1983	1989	1991	1992	1993
Cutthroat	Trapper Creek, above upper bridge	13.3	11.1	21.1	--	--	--
	Trapper Creek, above lower bridge	--	--	--	7.3	15.2	--
	Trapper Creek, below East Fork	--	--	11.6	4.3	3.8	1.3
	Trapper Creek, mouth	0.01	--	--	--	--	--
Bull trout	Trapper Creek, below East Fork	--	--	--	5.1	3.0	4.5

- Snorkeling done in 1982, 1983, and 1989, electrofishing in 1991, 1992, and 1993.
- No 1993 estimated Trapper Creek near lower bridge due to equipment failure.
- 1993 estimate at Trapper Creek below East Fork probably slightly low due to equipment problem.

Table 3. Length frequency distribution of cutthroat trout and bull trout captured from the Lower Trapper Creek monitoring site, 1993.

Length (mm)	Bull trout	Cutthroat trout
20-29		
30-39	3	0
40-49	6	0
50-59	13	0
60-69	12	0
70-79	0	1
80-89	3	4
90-99	6	4
100-109	3	1
110-119	2	1
120-129	1	1
130-139	0	0
140-149	0	1
150-159	0	1
160-169	0	0
170-179	0	0
180-189	0	1
190-199	0	0
200-209	1	0
210-509	0	0
510-519	1	0
520-529	1	0

Table 4. Comparison of actual numbers of fish captured and estimated for the Lower Trapper Creek site, 1992 and 1993.

Species	Size Group (mm)	<u>Number caught</u>		<u>Estimated number present</u>	
		1992	1993	1992	1993
Cutthroat	30-69	4	0	*	*
	70-109	11	10	16	10
	≥110	15	5	20	*
Bull trout	30-69	10	34	12	36
	70-129	20	15	24	15
	≥130	1	3	*	*

\*Insufficient captured fish to calculate estimate.

Table 5. Summary of 1993 electrofishing - South Fork Coeur d'Alene River.

Date	Location	Species	Size group (mm)	Estimated density (fish/100m <sup>2</sup> )	CPUE (fish/hr)
7/26	Pine Creek to mouth	WCT	300-449	--	3.3
		BRK	≥200	--	1.1
		MWF	70-99	--	3.3
			(YOY)		
		MWF	240-329	--	3.3
	8/13	US	240-249	--	1 1
		WCT	150-159	--	1 0
		BRK	170-259	--	2.0
		MWF	80-89	--	1.0
		MWF	200-219	--	2.0
8/2	Smelterville Flats	BBH	130-139	--	1.0
		US	130-169	--	2.0
8/2-8/6	Elizabeth Park	WCT	100-199	0.11	6.5
		WCT	320-329	<0.01	
		BRK	50-99	0.17	6.9
		BRK	110-159	0.36	18.5
		BRK	≥160	0.03	2.8
8/2-8/6	Silverton	WCT	<80	--	1.7
		WCT/WRB	≥100	0.84	27.6
		/HYB			
		BRK	<100	<0.01	--
		BRK	110-209	0.37	15.9
		HRB	270-289	--	2.5

Abbreviations:

WCT	- Westslope cutthroat	BRK	- Brook trout
MWF	- Mountain whitefish	HYB	- Rainbow/cutthroat
US	- Unidentified sucker	WRB	- Wild rainbow
CPUE	- Catch per unit effort	YOY	- Young-of-the-year
HRB	- Hatchery rainbow	BBH	- Brown bullhead



Table 6. Calculated stream flow measurements for Grouse Creek, October 1993 through March 1994.

Date	Estimated flow (cfs)
10/14/93	14.2
11/19/93	15.0
12/14/93	26.2
1/11/94	27.2
2/18/94	32.5
3/23/94	124.5

Note: December, January, and February flow measurements made at an alternate site due to ice conditions.

Table 7. Local Working Committee, number of meetings required, and significant results.

Local Working Committee	Stream Segment of Concern	Number meetings	Significant results
Trestle Creek	Trestle Creek and tribe	8	<ul style="list-style-type: none"> <li>- Site specific riparian plans within 300 feet of water course</li> <li>- Minimum 50% canopy retention on cumulative effects study</li> <li>- Cumulative effects study for roads</li> </ul>
Movie River	Movie River and tribe	4	<ul style="list-style-type: none"> <li>- Increase Class II SPZ, retain non-merchantable timber</li> </ul>
Lakeview	Granite, North Gold, South Gold	5	<ul style="list-style-type: none"> <li>- Site specific riparian plans within 300 foot of Class I and 150 feet of all other waters</li> </ul>
Cocolalla	Cocolalla Creek, Fish Creek	3	<ul style="list-style-type: none"> <li>- Retain status quo</li> </ul>
Wolf Lodge	Wolf Lodge Creek and tribe	1	<ul style="list-style-type: none"> <li>- Retain status quo</li> </ul>
Steamboat	Steamboat Creek	1	<ul style="list-style-type: none"> <li>- Retain status quo</li> </ul>
Tepee/ Independence	Tepee Creek, Independence Creek	1	<ul style="list-style-type: none"> <li>- Retain status quo</li> </ul>
Priest Lake	Upper Priest River, trapper Creek, Two Mouth Creek	1	<ul style="list-style-type: none"> <li>- Review data and plan 1994 field trips</li> </ul>



## JOB PERFORMANCE REPORT

State of: Idaho Name: FISHERY PROGRAM COORDINATION  
Project No.: F-82-T-4 Title: Southwest Region Technical  
Guidance  
Subproject No.: III Job No.: 2  
  
Period Covered: January 1, 1993 to December 31, 1993

### ABSTRACT

During the period January 1, 1993 through March 15, 1994, the Southwest Region environmental staff biologist provided technical review, comments and assistance on about 560 documented occasions. The majority of interaction was with state and federal agencies on a variety of land and water management issues having potential impacts on fish and wildlife habitats. Nearly 43 percent of these contacts were with the Idaho Department of Water Resources (IDWR) and the U.S. Forest Service (USFS). Population growth in the Treasure Valley and elsewhere in the region has required increased emphasis be directed at the effects of urban sprawl on fish and wildlife resources. All activities of the environmental staff biologist were closely coordinated with Idaho Department of Fish and Game (IDFG) staff responsible for policy decisions and fish and wildlife management personnel.

Author:

Scott A. Grunder  
Environmental Staff Biologist

## **OBJECTIVES**

To provide technical assistance to city, county, private, state and federal entities in matters relating to fish and wildlife and their habitats.

## **RECOMMENDATIONS**

1. Continue efforts to work with state, federal, local governments and private entities in educating land managers and laypersons about fish and wildlife habitat protection.
2. Continue efforts to establish good working relationships with state and federal regulatory and land and water management agencies.
3. Develop procedures for monitoring the progress of timber harvest activities on state and federal lands and determining how well these agencies are protecting fish and wildlife resources.

## **TECHNIQUES USED**

During the period January 1, 1993 through December 31, 1993, the Southwest Region environmental staff biologist provided technical assistance on a variety of land and water management proposals which could affect fish and wildlife resources. This technical review was closely coordinated with other IDFG staff. Example issues were timber harvest, mining, livestock grazing allotments, water rights, land use planning and zoning, stream channel alterations, water quality/quantity and expansion of an air force training range. Oftentimes, interagency and interdisciplinary meetings were needed to discuss and resolve often contentious proposals. There was no fish population sampling work completed under the Antidegradation Program during the above reporting period.

## **FINDINGS**

The environmental staff biologist provided technical guidance and review for a variety of land and water management proposals on about 560 known occasions (Table 1). The majority of effort was directed towards the IDWR (26%), USFS (17%) and planning and zoning issues (23%). There were issues handled primarily by the environmental staff biologist in the Southwest Region which warrant further discussion.

### Steering Committees, Task Forces and Advisory Groups

The environmental staff biologist directly participated as a member on twelve active committees, task forces or advisory groups, each with a separate set of goals and objectives. Each

of these groups involved a host of meetings and field reviews. These groups are as follows:

- a) Nonpoint Source Workshop Steering Committee
- b) Lower Boise River Water Quality Management Plan-Technical Advisory Group
- c) Boise River 2000-Advisory Group
- d) Boise River Bridge Proposals-Technical Advisory Committee
- e) Lowman-North Fire Technical Review Committee
- f) Payette River Basin Interagency Recreation Committee
- g) U.S. Army Corps of Engineers Permit Review Interagency Committee
- h) Big Payette Lake Water Quality Study
- i) Payette River Estates #3 Interagency Review Committee
- j) Linder Road Bridges Wetland Compensation Channel Interagency Review Team
- k) DeLamar Mine Interagency Monitoring Group
- l) Payette National Forest Large Mines Interagency Coordination Group

IDFG participation was officially requested for most of these groups and it is probably warranted for the IDFG to continue to play an active participatory role.

#### Idaho Training Range

The environmental staff biologist continued as the regional liaison/contact in discussions of the proposed range expansion and closely coordinated all activities with headquarters and regional staff. Of major importance during the reporting period was assistance with development and coordination, and editing of IDFG comments on the Draft Environmental Impact Statement (EIS) for the Idaho Training Range. Additionally, the IDFG developed a proposed mitigation/compensation package for decision-makers to consider should the range proposal be implemented. Much effort was directed towards keeping the regional staff as informed and involved as possible. Additional effort will be expended with release of the Final EIS and as future Air Force decisions pertaining to the range are made public.

#### Joint Task Forces of the IDFG and Boise National Forest

During a May 1993 coordination meeting with the Boise National Forest, we jointly defined the need for three separate

task forces as an attempt to achieve solutions to the topics of access management, bull trout and forest health. A Forest Service staff officer and the environmental staff biologist were assigned the roles of overseeing all coordination and development of issue statements and action plans for the above topics. Significant progress was made in producing issue statements and action plans by late 1993; however, significant progress has not carried over into 1994. Action plans will be difficult to carry out due to the differing management roles of the two agencies. It is critical that additional effort be expended to resolve these issues based on trends in forest health, watershed health, fish and wildlife species management and human population growth.

Table 1. Summary of technical assistance contacts by the Southwest Region environmental staff biologist during the period January 1, 1993 through December 31, 1993.

Agency/Group	Number of Contacts
U.S. Forest Service	95
Bureau of Land Management	17
U.S. Army Corps of Engineers	19
Environmental Protection Agency	3
Bureau of Reclamation	9
U.S. Fish and Wildlife Service	3
Federal Energy Regulatory Commission	7
U.S. Armed Services	5
U.S. Department of Transportation	3
National Marine Fisheries Service	1
Idaho Department of Water Resources	143
Idaho Department of Parks & Recreation	3
Idaho Department of Lands	23
Idaho Department of Health & Welfare	22
Idaho Department of Transportation	6
Idaho State Land Board	4
City/County Governments	44
General Public/Developers/Media/Consultants/ Environmental	82
Intradepartmental	71
TOTAL	560





## JOB PERFORMANCE REPORT

State of: Idaho

Name: FISHERY PROGRAM COORDINATOR

Project No.: F-82-T-4

Title: Magic Valley Region  
Technical Guidance

Subproject No.: III

Job No.: 3

Period Covered: January 1, 1993 to December 31, 1993

### ABSTRACT

During calendar year 1993, the Magic Valley Region environmental staff biologist provided comments, technical review, and support on approximately 315 occasions to other federal, state, local, and private organizations. The majority of time was spent dealing with water-related issues such as stream alterations, water rights, water quality working groups, and hydropower functions. Additional duties included coordination of timber sale-related activities and mining activities with the responsible agencies. Coordination with appropriate Idaho Department of Fish and Game (IDFG) regional staff was also incorporated into all projects reviewed.

Author:

David E. Parrish  
Environmental Staff Biologist

## OBJECTIVES

To provide technical assistance and comments to other government agencies (state, federal, and local), organizations, or individuals regarding projects or activities which potentially affect fish or wildlife resources or habitat in the Magic Valley Region. \_

## TECHNIQUES USED

The Magic Valley Region Environmental Staff Biologist used regional staff, field inspections, literature searches, and professional expertise to form comments and furnish recommendations.

## FINDINGS

The following is a breakdown of entities which were provided technical guidance or project review by the Magic Valley Region Environmental Staff Biologist. Each contact represents a meeting or document response:

U.S. Forest Service (USFS)	44
Bureau of Land Management (BLM)	17
National Parks Service (NPS)	1
U.S. Fish and Wildlife Service (USFWS)	6
Environmental Protection Agency (EPA)	3
Bureau of Reclamation (BOR)	5
U.S. Army Corps of Engineers (USCOE)	27
Soil Conservation Service (SCS)	3
Idaho Dept. of Water Resources (IDWR)	109
Idaho Health and Welfare, Division of Environmental Quality (IHW-DEQ)	18
Idaho Dept. of Lands (IDL)	17
Idaho Dept. of Transportation (IDT)	15
Idaho Dept. of Parks and Recreation (IPR)	3
County/City Government	20
Private Development	27
	-----
Total	315

### Miscellaneous Activities

Evaluation of hydropower impacts on both aquatic and terrestrial resources from existing and proposed projects required significant amounts of time. Document review, agency meetings, on-site reviews, inspections, and drafting follow-up comments were conducted for the following projects:

## Major Projects

Star Falls (5797<sup>1</sup>)  
Auger Falls (4797)  
Kanaka Rapids (10930)  
Boulder Rapids (10772)  
Empire Rapids (10849)  
Twin Falls (18)  
Upper Salmon (2777)  
Lower Salmon (2061)  
Bliss (1975)

## Minor Projects

Shorock (9967)  
Mile 28 (10552)  
Blind Canyon (8375)  
White Ranch (6271)  
Magic Dam (3407)  
Sahko (11060)  
N-2 (11050)  
U-3 (11409)  
Malad High-Drop (3924)  
Koyle Ranch (4052)  
Billingsley Cr. (6208)  
Little Mac (6443)

<sup>1</sup>Federal Energy Regulatory Commission number

### Major Projects of Interest:

1. **Stream Alterations** - The environmental staff biologist evaluated a total of 81 IDWR stream alteration permit applications covering seven IDWR water basins for impacts to fish and wildlife. In addition, technical guidance was provided in response to violations of the Stream Channel Protection Act and federal Clean Water Act. Recommendations were made regarding revegetation plans, placement of bank stabilization structures, and seasonal timing of work to maximize success of area rehabilitation while minimizing impacts to existing biota. Violations commented on occurred at Minidoka Dam and King Hill (Snake River), Rock Cr., Drake property (Big Wood River), District 37M and Carey property (Little Wood River), Blue Lakes (Alphius Cr.), 3-Creeks Ranch (Grove Cr.), Patton Cr., Cedar Draw Creek, and Silver Creek.

Mitigation and plan review was provided to IHW-DEQ for a state water quality violation on Trail Creek in Sun Valley. Restitution includes fish ladder reconstruction on the company-owned dam and funding riparian restoration upstream of the violation site.

2. **Water Management and Planning** - The Comprehensive State Water Plan (Snake River: Milner Dam to King Hill) was reviewed with technical written and verbal comments supplied to the Idaho Water Resource Board. The Magic Valley Region was highly supportive of the plan and it's goal to not only protect but to improve water quality in the Mid-Snake River reach.

Conjunctive management rules for ground water and surface water, drafted and published by IDWR, were reviewed with technical written comments furnished to IDFG staff and verbal comments supplied to the Director of IDWR.

A total of 17 new water rights or transfers were protested in the Magic Valley Region during calendar year 1993. All dealt with surface allocation of waters for both consumptive and non-consumptive uses. Reasons for protesting included reducing in-stream flows, degrading water quality, appropriation of water

which would reduce flow of an existing IDFG water right, point of diversion was moved up-stream, or additional information was needed to make an accurate assessment of impacts to fish or wildlife.

Participation and technical guidance was furnished to various groups concerned with water quality improvement in the Mid-Snake River. IDFG was represented on the Mid-Snake Nutrient Management Committee (IHW-DEQ) Technical and Executive Committees along with providing review of draft documents for aquaculture, confined cattle feeding, and hydropower water quality improvement plans. The environmental staff biologist also participated with the Mid-Snake River Irrigators and the Mid-Snake Regional Resource Commission, both groups working to improve Snake River water quality. The environmental staff biologist also participated on a IHW-DEQ Aquaculture Plan and Specification Review Committee to evaluate water quality-related impacts to fish and wildlife from expansion or construction of new aquaculture facilities.

**3. Timber Sales** - Review, coordination, and comments were provided on three different timber sales during 1993. Forest health/insect infestation dictated timber removal for all three projects.

The Black Pine salvage sale (Sawtooth National Forest, Burley District) was by far the largest (12.6 mmfb) sale and potentially impacted the most critical fish and wildlife habitat. Fish and wildlife mitigation measures negotiated by regional staff included closing of existing roads/trails to motorized vehicles, utilizing bridges instead of fords for stream crossings, pre- and post-sale water quality monitoring, seasonal restrictions on activity during critical deer fawning periods and hunting season, and helicopter logging of fragile areas. Harvest will begin in the spring of 1994.

The Deer Creek salvage sale, located north of Fairfield, Idaho, is a joint sale between the BLM (Shoshone District) and IDL. A total of 4 mmbf of dead timber will be removed in 1994. IDFG involvement included site review, providing historic wildlife use records and electrofishing of perennial streams with the agencies. Fish and wildlife mitigation included pre-sale marking of snag/habitat trees, helicopter logging fragile areas, developing a road rehabilitation plan which includes pulling roads up after sale administration, seeding with native plant species, use of temporary culverts and bridges for stream crossings rather than the proposed fords, and providing an adequate rest period for the vegetation to re-establish before being returned to the grazing allotment inventory.

The date timber will be salvaged from the Burnt Creek timber sale is unknown. Located on the upper South Fork Boise River in the Boise National Forest (Mountain Home Ranger District), it potentially will have significant impacts on fish and wildlife resources. Major issues identified include: documented elk calving areas within the unit boundary, identification of streams known to contain bull trout (Salvelinus confluentus) within the sale area, and data on use of the sale area by wolverine (Gulo

gulo), another species of wildlife which could potentially be protected under the Federal Endangered Species Act.

**4. Mining Activity** - The environmental staff biologist attended meetings and field reviews for two commercially active and one proposed exploration plan within the Magic Valley Region. Input was provided to the lead agencies which include IDL, USFS, and ELM.

Black Pine Mine, which is jointly administered by the USFS and BLM, required the largest amount of time to provide agency input. Activities included annual coordination; evaluating and providing comments to an environmental impact statement (EIS) for expansion of the existing mine impact area; participating in a habitat evaluation procedure (HEP) for wildlife mitigation for expansion of the mine and existing facilities which will be used during expansion; evaluating and commenting on an EIS for clean-up of the historic Talman Mine tailings within the boundary of the existing mine site; and providing review and technical assistance on an emergency land application of neutralized cyanide solution.

Biomyne continued exploration activities in the Sun Valley area during 1993. Comments were provided to the USFS on location of roads, exploration road reclamation plans, and seasonal timing of activities to minimize impacts to wildlife.

A small-scale placer mining operation began production at Rocky Bar on the upper S. Fk. Boise River. Technical assistance was given to IDL on site reclamation plans and mitigation.

Documents were reviewed and comments supplied to Planning and Zoning groups and County Commissions in Gooding, Jerome, Twin Falls, and Blaine counties during 1993. Technical assistance was provided on direct and indirect impacts to fish and wildlife resources and recommendations were made for mitigation to minimize predicted impacts.



## JOB PERFORMANCE REPORT

State of: Idaho Name: FISHERY PROGRAM COORDINATION  
Project No.: F-82-T-4 Title: Upper Snake Region  
Technical Guidance  
Subproject No.: III Job No.: 4

Period Covered: January 1, 1993 to December 31, 1993

### ABSTRACT

During calendar year 1993, the Upper Snake Region environmental staff biologist provided technical review and comments on about 384 occasions. The majority of interaction was with federal and state agencies on a variety of land and water management issues having potential impact on fish and wildlife habitats. Major duties included forest management, hydropower project operations and compliance, stream alterations, wetland fills, and Henrys Fork basin issues. Activities were closely coordinated with appropriate Idaho Department of Fish and Game (IDFG) staff.

Author:

Robert C. Martin  
Environmental Staff Biologist



## OBJECTIVES

To provide technical assistance to city, county, private, state, and federal entities in matters relating to fish and wildlife habitats.

## TECHNIQUES USED

Document review, literature research, field inspection, and consultation with appropriate policy and management personnel was used to provide comments and recommendations on actions proposed by private entities, local governments, and state and federal agencies.

## FINDINGS

The Region 6 environmental staff biologist provided the following number of written or verbal comments to the listed entities:

U.S. Forest Service (USFS)	49
Bureau of Land Management (BLM)	22
Corps of Engineers (COE)	51
Bureau of Reclamation (BOR)	16
Fish and Wildlife Service (FWS)	36
Federal Energy Regulatory Commission/ Utilities	45
Environmental Protection Agency (EPA)	4
Soil Conservation Service (SCS)	4
Northwest Power Planning Council/ Bonneville Power	2
Shoshone-Bannock Indian Tribes	4
Idaho Dept. of Water Resources (IDWR)	47
Idaho Dept. of Lands (IDL)	4
Idaho Division of Environmental Quality (IDEO)	8
Idaho Transportation Department (ITD)	4
Idaho Dept. of Parks and Recreation (IDPR)	3
City/County Governments	19
Private developers/environmental groups	29
Media	10
Intradepartment	<u>27</u>
TOTAL	384

## Summary of selected projects:

### Targhee Forest Plan Revision

I attended nine major meetings with Targhee Forest planners and biologists. Frequent assistance is being provided to other agency personnel and environmental groups with interest in the plan revision. Draft management prescriptions and site-specific and forest-wide standards and guidelines are completed. Meetings with the forest supervisor resulted in a road density and motorized use signed agreement between the Targhee and IDFG. Our interagency working relations have improved, primarily due to IDFG and USFS efforts at the district level and the transfer or retirement of key supervisor's office staff.

With assistance from IDFG staff, comments were provided on nine timber sales. We appealed the West End sale, and it was revised to delete half the cutting units. We submitted a formal opinion to the Forest Service regional office on the Dugway-Ghost sale, and it was followed by direction to the Targhee to acknowledge our population data and revise future sale proposals. Annual timber harvest off the Targhee has been decreased from the pre-1991 levels of 66-98 million board feet to 21 million board feet in 1993, with personal firewood comprising about half the 1993 harvest.

During 1993, the Targhee Forest did not fulfill their responsibilities under our signed agreement to settle the Pole Bridge/Big Grassy appeal. They did not meet the agreed goals for NEPA planning and Warm River area closure implementation for May and September 1993, respectively. Their purpose for the delay is to resolve a grizzly bear lawsuit, and they predict the recovery plan to resolve that lawsuit will fulfill the area closure provision of the Pole Bridge/Big Grassy agreement.

### Henrys Fork Fishery/Trumpeter Swan Recovery

The Henrys Fork is a world-famous trout fishery, and it supports large numbers of wintering trumpeter swans, a candidate species for listing under the Endangered Species Act. The Island Park Dam through Harriman State Park fishery has suffered a long-term (13 year) decline. IDFG trout population estimates for the upper four miles (Box Canyon) declined by 84% from 1978 to 1991. Idaho State University research suggests that near-shore cobble/boulder areas are the most important juvenile salmonid habitat. Winter flow releases from Island Park Reservoir are important to maintain adequate water levels. However, research by FWS and IDFG shows that healthy aquatic vegetation is the most important factor in maintaining winter water levels in the Henrys Fork below Island Park Dam. Aquatic vegetation slows and displaces water, raising water levels and making more near-shore habitat available to juveniles.

Increasing numbers of waterfowl (trumpeter swans, Canada geese, and ducks) wintering on the Henrys Fork are jeopardizing the aquatic vegetation. Heavy waterfowl grazing during the winter of 1988-89 left large reaches of the river channel denuded of vegetation'. Active trapping/transplanting of trumpeter swans and hazing of all waterfowl since 1989 has reduced localized impacts on aquatic vegetation. The trapping/hazing program is expensive and has several other problems. Without a long-term commitment to control local waterfowl numbers and without establishment of additional secure winter range for trumpeter swans, it will likely be impossible to maintain aquatic vegetation at the health and density necessary to protect documented winter trout habitat. Successfully recovering the Henrys Fork fishery while maintaining a viable trumpeter swan population will take close coordination between many interest groups.

During the 1992 Island Park Reservoir drawdown, a large quantity of sediment was flushed into the Henrys Fork. The substrate and nutrients will contribute to recovery of the aquatic vegetation community. However, the total quantity of sediment, and its filling of cobble/boulder near-shore habitat for juvenile trout led to a sediment flushing project. I coordinated an interagency effort to flush sediment downstream during the spring of 1993. An estimated 25-50% of the sediment deposited by the 1992 reservoir drawdown was successfully flushed downstream.

Given the fact that the Island Park Dam through Harriman Park reach is managed under catch and release regulation, it is likely the long-term trout population is limited by habitat and recruitment. The Ponds Lodge Hydroelectric Project (200 yards above confluence with Henrys Fork) is a migration barrier for trout attempting to move into the Buffalo River to spawn. Miles of underutilized spawning and rearing habitats are potentially available in the Buffalo. Re-establishing access for the Henrys Fork spawners would significantly increase trout recruitment to the Henrys Fork. The FERC has disregarded IDFG and FWS requests that the licensee be ordered to install fish passage facilities. The FERC states we must coordinate a study of the need for, and feasibility of, fish passage facilities. This study will be conducted in 1994.

The Island Park Hydroelectric facility will begin operating in 1994. The licensee has proposed to construct a collar on the existing reservoir surface spillway. This will significantly increase electricity output, while allowing greater control over the depth from which reservoir flow releases can be drawn. Among other things, this has the potential to affect the temperature and chemistry of reservoir releases to the Henrys Fork. The spillway modification, if implemented, could benefit or adversely affect the fishery, depending on how it is operated. Preliminary scoping was conducted for the project in 1993. I will be working with the licensee on developing an environmentally-preferred alternative.

## Teton Valley Wetlands

In 1993, we reviewed numerous subdivision and wetland fill applications in this area. The COE is continuing to permit wetland fills for access roads to upland home sites. I worked with the COE on minimizing each project's impacts, while striving for a cumulative effects analysis. The unique wetlands and associated fish and wildlife habitats are in jeopardy. I coordinated our efforts with the FWS and EPA, who are similarly concerned with wetland impacts in the valley.

## Birch Creek Hydroelectric Project,

This year's efforts by the licensee to increase flows at the power plant included a proposal to place about half the flow of 6.5 miles of Birch Creek into a pipeline and a proposal to place 350 cubic yards of sand and clay into the stream. Analysis of the potential impacts led to IDFG's recommendation to deny both applications. Neither project was implemented.

## Gem State Hydroelectric Project

Based on our documentation of the licensee's mitigation deficiencies, the City of Idaho Falls is improving its mitigation plan. I attended four meetings and two field tours to assess their license compliance and make recommendations. The City will now construct additional wetlands at the nine-acre, on-site area. They have also installed facilities to increase the off-site wetland acres being created.

## Big Lost River

As a result of increasing irrigation withdrawals and drought, many miles of the river and tributaries have been dry for the past six or seven years. Stream Channel Protection Act violations such as farming wheat in a streambed, and impacts to fish habitat (such as hard rock mining from the river channel) were occurring or being proposed based on the channels being dry. I opposed two stream alteration permit applications and worked with IDWR to successfully assert protection of Big Lost drainage channels in anticipation of reestablishing flows and a public fishery.

Submitted by:

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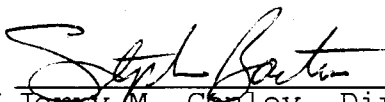
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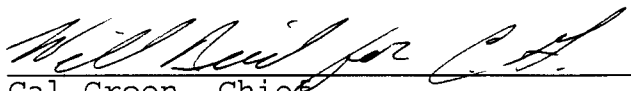
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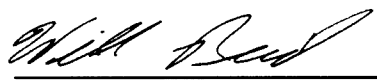
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